Issued October 1967

SOIL SURVEY
Randolph County, Alabama

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
In cooperation with
ALABAMA AGRICULTURAL EXPERIMENT STATION
and
ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES

Major fieldwork for this soil survey was done in the period 1956–63. Soil names and descriptions were approved in 1965. Unless otherwise indicated, statements in the publication refer to conditions in the county in 1965. This survey was made cooperatively by the Soil Conservation Service, the Alabama Agricultural Experiment Station, and the Alabama Department of Agriculture and Industries; it is part of the technical assistance furnished to the Piedmont Soil Conservation District.

HOW TO USE THIS SOIL SURVEY

THIS SOIL SURVEY contains information that can be applied in managing farms and woodlands; in selecting sites for roads, ponds, buildings, or other structures; and in appraising the value of tracts of land for agriculture, industry, or recreation.

Locating Soils

All of the soils of Randolph County are shown on the detailed map at the back of this survey. This map consists of many sheets that are made from aerial photographs. Each sheet is numbered to correspond with numbers shown on the Index to Map Sheets.

On each sheet of the detailed map, soil areas are outlined and are identified by symbol. All areas marked with the same symbol are the same kind of soil. The soil symbol is inside the area if there is enough room; otherwise, it is outside and a pointer shows where the symbol belongs.

Finding and Using Information

The "Guide to Mapping Units" can be used to find information in this survey. This guide lists all of the soils of the county in alphabetic order by map symbol. It shows the page where each kind of soil is described, and also the page for the capability unit, woodland group, or any other group in which the soil has been placed.

Individual colored maps showing the relative suitability or limitations of soils for many specific purposes can be developed by using the soil map and information in the text. Interpretations not included in the text can be developed by grouping the soils according to their suitability or limitation for a particular use. Translucent material can be used as an overlay over the soil map and colored to show soils that have the same limitation or suitability. For example, soils that have a slight limitation for a given use can be colored green, those with a moderate limitation can be colored yellow, and those with a severe limitation can be colored red.

Farmers and those who work with farmers can learn about use and management of the soils from the descriptions of the soils and from the discussions of the capability groups.

Foresters and others can refer to the section "Use of the Soils For Woodland," where the soils of the county are grouped according to their suitability for trees.

Game managers, sportsmen, and others concerned with wildlife will find information about soils and wildlife in the section "Use of the Soils For Wildlife and Fish."

Engineers and builders will find, under "Use of the Soils For Engineering," tables that describe soil properties that affect engineering and show the relative suitability of the soils for specified engineering purposes.

Scientists and others can read about how the soils were formed and how they are classified in the section "Formation, Morphology, and Classification of the Soils."

Students, teachers, and others will find information about the soils and their management in various parts of the text, depending on their particular interest.

Newcomers in Randolph County may be especially interested in the section "General Soil Map," where broad patterns of soils are described. They may also be interested in the section "General Nature of the County."

***Cover picture.*—Typical rolling landscape in Randolph County. Cattle are grazing fescue and Ladino clover on Madison-Louisa association.**

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EXPLANATION

Series Year and Series Number

Series year and number were dropped from all soil surveys sent to the printer after December 31, 1965. Many surveys, however, were then at such advanced stage of printing that it was not feasible to remove series year and number. Consequently, the last issues bearing series year and number will be as follows:

Series 1957, No. 23, Las Vegas and Eldorado Valleys Area, Nev.
Series 1958, No. 34, Grand Traverse County, Mich.
Series 1959, No. 42, Judith Basin Area, Mont.
Series 1960, No. 31, Elbert County, Colo. (Eastern Part)
Series 1961, No. 42, Camden County, N. J.
Series 1962, No. 13, Chicot County, Ark.
Series 1963, No. 1, Tippah County, Miss.

Series numbers will be consecutive in each series year, up to and including the numbers shown in the foregoing list. The soil survey for Tippah County, Miss., will be the last to have a series year and series number.

SOIL SURVEY OF RANDOLPH COUNTY, ALABAMA

BY WILLIAM B. PARKER, SOIL CONSERVATION SERVICE

FIELD SURVEY BY WILLIAM B. PARKER, BILLY D. BATCHELOR, OLIVER R. CARTER, LEWIS A. DUNGAN, AND HAROLD L. MATHEWS, SOIL CONSERVATION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, IN COOPERATION WITH THE ALABAMA AGRICULTURAL EXPERIMENT STATION AND THE ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES

RANDOLPH COUNTY is in east-central Alabama (fig. 1). It has an area of 581 square miles, or 371,840 acres. The climate is generally mild and humid. Rainfall is abundant and generally well distributed. Wedowee, the county seat, is near the center of the county. It is 80 miles northeast of Montgomery, 80 miles east of Birmingham, and 60 miles west of Atlanta, Ga.

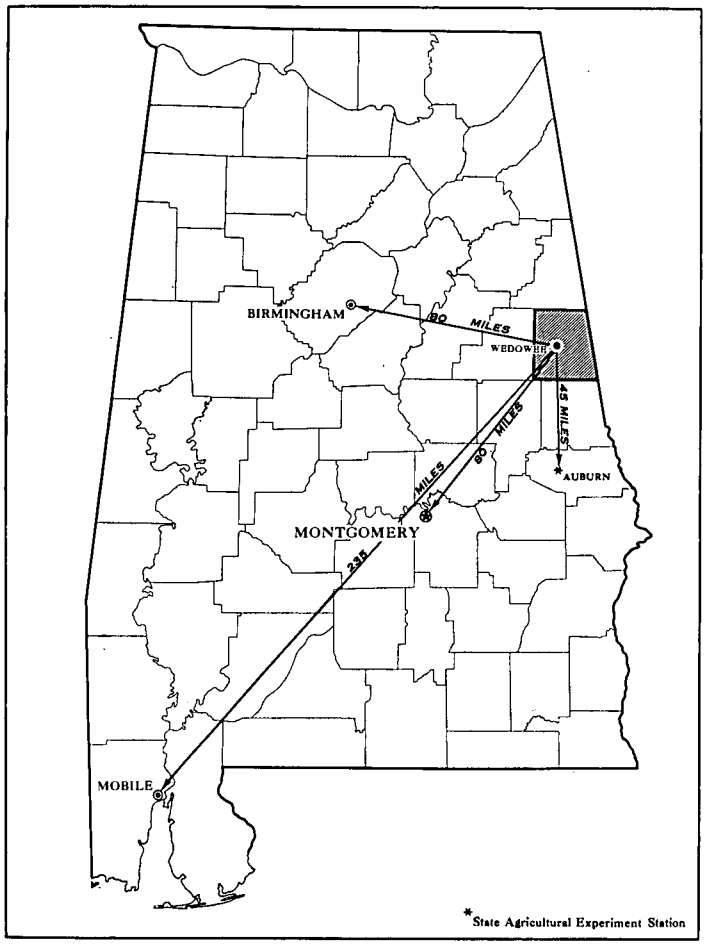

Figure 1.—**Location of Randolph County in Alabama.**

Since early settlement, the county has been primarily agricultural. Corn, cotton, small grain, hay, and livestock have been the main agricultural products and the principal source of farm income. Raising poultry (mainly broilers), beef cattle, and hogs has become an important enterprise. About 72 percent of the county is now woodland, mainly loblolly pine. Wood crops have become increasingly important in the economy of the county.

Randolph County has an abundant supply of water from the Tallapoosa and Little Tallapoosa Rivers and from numerous creeks and branches. The streams in general have considerable fall and are deepening their channels. As a result, they have narrow bottom lands that are cut off in places as the streams swing toward the bluffs. The bottom lands along some of the larger creeks are wider. In the vicinity of Roanoke, Rock Mills, and Wadley, the landscape is one of low, rolling ridges. The northern and western parts of the county are rolling to hilly or mountainous.

How This Soil Survey Was Made

Soil scientists made this survey to learn what kinds of soils are in Randolph County, where they are located, and how they can be used. They went into the county knowing they likely would find many soils they had already seen, and perhaps some they had not. As they traveled over the county, they observed steepness, length, and shape of slopes; size and speed of streams; kinds of native plants or crops; kinds of rock; and many facts about the soils. They dug many holes to expose soil profiles. A profile is the sequence of natural layers, or horizons, in a soil; it extends from the surface down into the parent material that has not been changed much by leaching or by roots.

The soil scientists made comparisons among the profiles they studied, and they compared these profiles with those in counties nearby and in places more distant. They classified and named the soils according to nationwide, uniform procedures. To use this survey efficiently,

it is necessary to know the kinds of groupings most used in a local soil classification.

Soils that have profiles almost alike make up a soil series. Except for different texture in the surface layer, the major horizons of all the soils of one series are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or other geographic feature near the place where a soil of that series was first observed and mapped. Cecil and Madison, for example, are the names of two soil series. All the soils in the United States having the same series name are essentially alike in those characteristics that affect their behavior in the natural, undisturbed landscape. Soils of one series can differ somewhat in texture of the surface soil and in slope, stoniness, or some other characteristic that affects use of the soils by man.

Many soil series contain soils that differ in texture of their surface layer. According to such differences in texture, separations called soil types are made. Within a series, all the soils having a surface layer of the same texture belong to one soil type. Cecil gravelly sandy loam and Cecil gravelly clay loam are two soil types in the Cecil series. The difference in texture of their surface layers is apparent from their names.

Some soil types vary so much in slope, degree of erosion, number and size of stones, or some other feature affecting their use, that practical suggestions about their management could not be made if they were shown on the soil map as one unit. Such soil types are divided into soil phases. The name of a soil phase indicates a feature that affects management. For example, Cecil gravelly clay loam, 2 to 6 percent slopes, severely eroded, is one of several phases of Cecil gravelly clay loam, a soil type that has a slope range of 2 to 25 percent.

After a guide for classifying and naming the soils had been worked out, the soil scientists drew the boundaries of the individual soils on aerial photographs. These photographs show woodlands, buildings, field borders, trees, and other details that help in drawing boundaries accurately. The soil map in the back of this survey was prepared from the aerial photographs.

The areas shown on a soil map are called mapping units. On most maps detailed enough to be useful in planning management of farms and fields, a mapping unit is nearly equivalent to a soil type or a phase of a soil type. It is not exactly equivalent, because it is not practical to show on such a map all the small, scattered bits of soil of some other kind that have been seen within an area that is dominantly of a recognized soil type or soil phase.

In preparing some detailed maps, the soil scientists have a problem of delineating areas where different kinds of soils are so intricately mixed or occur in such small individual tracts that it is not practical to show them separately on the map. They show such a mixture of soils as one mapping unit and call it a soil complex. Ordinarily, a soil complex is named for the major kinds of soils in it, for example, Cecil-Madison-Urban land complex.

Another kind of mapping unit is the undifferentiated group, which consists of two or more soils that may occur together without regularity in pattern or relative proportion. The individual tracts of the component soils could be shown separately on the map, but the differences between the soils are so slight that the separation is not important for the objectives of the soil survey. An example is Wehadkee and Mantachie soils.

In most areas surveyed there are tracts in which the soil material is so rocky, so shallow, or so frequently worked by wind and water that it scarcely can be called soil. These tracts are shown on the soil map like other mapping units, but they are given descriptive names, such as Gullied land or Rock land, and are called land types rather than soils.

While a soil survey is in progress, samples of soils are taken, as needed, for laboratory measurements and for engineering tests. Laboratory data from the same kinds of soils in other places are assembled. Data on yields of crops under defined practices are assembled from farm records and from field and plot experiments on the same kinds of soils. Yields under defined management are estimated for all the soils.

But only part of a soil survey is done when the soils have been named, described, and delineated on the map, and the laboratory data and yield data have been assembled. The mass of detailed information then needs to be organized in such a way that it is readily useful to different groups of readers, among them farmers, ranchers, managers of woodland, engineers, and homeowners. Grouping soils that are similar in suitability for each specified use is the method of organization commonly used in soil surveys. The soil scientists set up trial groups based on the yield and practice tables and other data. They test these groups by further study and by consultation with farmers, agronomists, engineers, and others; then they adjust the groups according to the results of their studies and consultation. Thus, the groups that are finally evolved reflect up-to-date knowledge of the soils and their behavior under present methods of use and management.

General Soil Map

The general soil map at the back of this survey shows, in color, the soil associations in Randolph County. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern.

A map showing soil associations is useful to people who want a general idea of the soils in a county, who want to compare different parts of a county, or who want to know the location of large tracts that are suitable for a certain kind of farming or other land use. Such a map is not suitable for planning the management of a farm or field, because the soils in any one association ordinarily differ in slope, depth, stoniness, drainage, and other characteristics that affect management.

The five associations in Randolph County are described in the paragraphs that follow.

1. Madison-Louisa association

Moderately deep or shallow, well-drained soils that formed over schist on broad and narrow ridges

This association (fig. 2) is a gently sloping plateau dissected by many intermittent and perennial streams. The stream pattern is branching, and the stream valleys are narrow and V-shaped. The divides between the streams form ridges that ordinarily have a slope of 2 to 15 percent. Along the streams the slope is 15 to 40 percent.

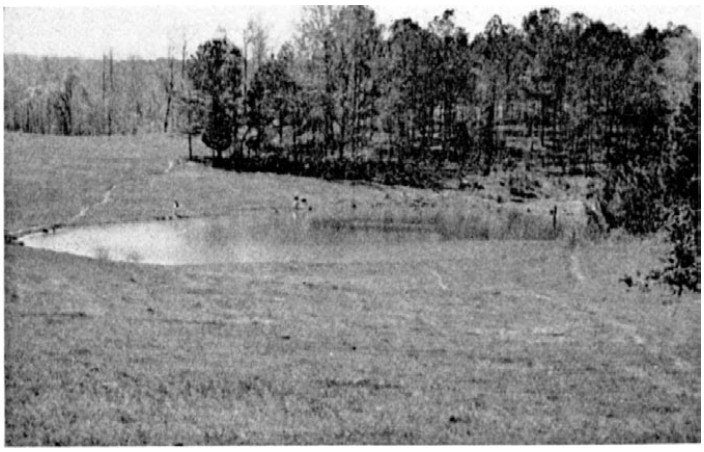

Figure 2.—Area in Madison-Louisa association. Madison gravelly fine sandy loam in foreground, and Louisa gravelly sandy loam in wooded area. Pond stores water for livestock and is stocked with fish.

Figure 3.—Area in Louisa-Madison association. Cattle are grazing fescue on Madison soils. Flat area is Chewacla silt loam, and steep wooded area in background is Louisa stony sandy loam.

This association is mainly in the eastern part of the county. It is 50 percent Madison soils, 40 percent Louisa soils, and 10 percent Hulett, Mantachie, and Wickham soils. The total acreage is about 37 percent of the county.

Madison soils occur on ridges. Their surface layer is gravelly fine sandy loam, and their subsoil is red clay. The underlying material is partly weathered schist. Bedrock is at a depth of more than 10 feet. In areas that have been intensively cultivated, these soils are severely eroded and their surface layer is yellowish-red gravelly clay loam.

Louisa soils are on steep slopes along drainageways. Their surface layer is either gravelly sandy loam or stony sandy loam, and the subsurface layers are sandy loam or loam with fragments of partly weathered mica schist. Bedrock is at a depth of more than 10 feet.

Hulett soils are on divides, low saddles, and toe slopes. Mantachie soils are on narrow flood plains, and Wickham soils are on high terraces.

About 95 percent of this association was once cleared and cultivated. Now about 70 percent of it is wooded. The trees are mainly second-growth pines. This association is the most intensively farmed of any in the county. The average size of the farms is 100 acres. General farming is a part-time enterprise on about half the farms, and corn, cotton, and small grain are the main crops. Broiler production is fairly extensive, and there are a few beef and dairy cattle farms.

2. *Louisa-Madison association*

Shallow or moderately deep, well-drained soils that formed over schist on narrow, sloping ridgetops and steep slopes

This association (fig. 3) is a strongly sloping plateau dissected by many intermittent and perennial streams. The stream pattern is branching, and the stream valleys are narrow and V-shaped. The divides between the streams form narrow ridges that ordinarily have a slope of 6 to 15 percent. Along the streams the slope is 15 to 40 percent.

This association is in the western part of the county. It is 60 percent Louisa soils, 30 percent Madison soils, and 10 percent Stony rough land and Mantachie soils. The total acreage is about 44 percent of the county.

Louisa soils are on steep slopes along drainageways. They have a surface layer of gravelly or stony sandy loam or slaty loam. In places the surface layer is underlain by a thin layer of yellowish-red or red clay loam. Partly weathered mica schist extends to a depth of 10 feet or more in most places.

Madison soils are on the narrow ridgetops. Their surface layer is gravelly fine sandy loam, and their subsoil is red clay. Below the subsoil is partly weathered schist. Bedrock is at a depth of more than 10 feet. In areas that have been intensively cultivated, these soils are severely eroded and their surface layer is yellowish-red gravelly clay loam.

Stony rough land is on the steeper slopes, or bluffs, near streams. Stones 10 inches to 3 feet in diameter cover about 50 percent of the surface and are imbedded in the soil. Mantachie soils are along the narrow drainageways.

About 50 to 60 percent of this association was once cleared and cultivated. Now about 90 percent of it is mixed pine and hardwood forest. Some of the smoother ridgetops are in pasture or cultivated crops. Some of the steeper slopes still support the original vegetation.

3. *Appling-Cecil-Louisburg association*

Moderately deep, deep, and shallow, well-drained soils that formed over granite on broad ridges

This association is a rolling plateau dissected by many intermittent and perennial streams. The stream pattern is branching, and the stream valleys are narrow and V-shaped. The flood plains are narrow. The divides between the streams form ridges that ordinarily have a slope of 2 to 15 percent. Along the streams the slope is 15 to 25 percent.

This association is 20 percent Appling soils, 40 percent Cecil soils, 10 percent Louisburg soils, and 30 percent Mantachie, Hulett, and Pacolet soils. The largest area is in the southeastern corner of the county. Small areas occur near Almond and near Blakes Ferry. The total acreage is about 8 percent of the county.

Appling soils are on ridges. Their surface layer is gravelly sandy loam, and their subsoil is yellowish-brown or yellowish-red, mottled sandy clay. In areas that have been cleared for a long time, these soils are eroded and their surface layer is yellowish-brown gravelly sandy clay loam. Bedrock is at a depth of more than 5 feet.

Cecil soils are on ridges and side slopes. They have a surface layer of gravelly sandy loam and a subsoil of red clay. In severely eroded areas, their surface layer is yellowish-red gravelly sandy clay loam. Bedrock is at a depth of more than 5 feet.

Louisburg soils are on steep slopes along drainageways. They have a surface layer of stony sandy loam over a thin, discontinuous subsoil. They are shallow over bedrock; in fact, some are only a few inches thick.

Mantachie soils are on flood plains along the narrow drainageways.

About 90 percent of this association was once cleared and cultivated. Now about 75 percent of it is wooded. The trees are mainly second-growth pines. The other 25 percent of the association is in pasture or cultivated crops. Most of the farms are small and are operated part time by the owners. Most are general farms, but on a few farms beef cattle, swine, or poultry are the main source of income.

4. *Davidson-Wilkes association*

Deep and shallow, well-drained, red, clayey soils that formed over basic and acidic rocks on broad and narrow ridges

This association is strongly dissected by streams. The stream pattern is branching, and the stream valleys are narrow and V-shaped. In most places the flood plains are narrow. The divides between the streams form ridges that ordinarily have a slope of 2 to 15 percent. Along the streams the slope is generally 15 to 25 percent.

This association is 70 percent Davidson soils, 12 percent Wilkes soils, and 18 percent Wehadkee and Mantachie soils. It occurs as small scattered areas throughout the county. The largest area is near Cornhouse Creek. The total acreage is about 2 percent of the county.

Davidson soils are on ridges and steep side slopes. Their surface layer is gravelly sandy loam, and their subsoil is dark-red clay. In areas that have been cleared for a long time, these soils are severely eroded and their surface layer is dark reddish-brown gravelly sandy clay loam or clay loam. The depth to bedrock is more than 4 feet.

Wilkes soils are on smooth divides and on moderately steep slopes along drainageways. Their surface layer is sandy loam. In some places it is underlain by a thin subsoil, and in others by bedrock. Some areas are stony. The depth to bedrock is about 1 foot.

Wehadkee and Mantachie soils are on flood plains along narrow drainageways.

About 70 percent of this association is wooded, and 20 percent is cultivated. The rest is used as pasture or is idle. Most of the farms are small and are operated part time by the owners. Farming is mainly of the general type, but on a few farms beef cattle and poultry are the main source of income.

5. *Mantachie-Ochlockonee association*

Deep, well-drained to somewhat poorly drained soils on flood plains

This association occurs as narrow strips along streams. It occurs in most parts of the county and makes up about 9 percent of the total acreage. It is about 60 percent Mantachie soils, 25 percent Ochlockonee soils, and 15 percent Wehadkee, Altavista, and Augusta soils.

For the most part, Mantachie soils occur along the larger creeks. Their surface layer is brown fine sandy loam, and their subsurface layer is mottled fine sandy loam to silt loam. Ochlockonee soils also occur along the larger streams. They are brown fine sandy loam throughout. Wehadkee soils and some areas of Mantachie soils are along small tributaries and creeks. Altavista and Augusta soils are on low terraces.

Most of this association has been cleared, but some of it has reverted to loblolly pine. Mantachie and Ochlockonee soils are well suited to corn and to pasture plants. The minor soils in the association are suited either to pasture or to wetland timber.

Descriptions of the Soils

This section describes the soil series and the mapping units of Randolph County. The approximate acreage and the proportionate extent of each mapping unit are given in table 1.

A general description of each soil series is given, and this is followed by brief descriptions of the mapping units in that series. For full information on any one mapping unit, it is necessary to read the description of the soil series as well as the description of the mapping unit.

Following the name of each mapping unit is a symbol in parentheses. This symbol identifies the mapping unit on the detailed soil map. Listed at the end of the description of each mapping unit are the capability unit, the woodland group, and the wildlife group in which the mapping unit has been placed. The page on which each capability unit, each woodland group, and each wildlife group is described can be found readily by referring to the "Guide to Mapping Units" at the back of the survey.

Soil scientists, engineers, students, and others who want detailed descriptions of soil series should turn to the section "Formation, Morphology, and Classification of the Soils." Many terms used in the soil descriptions and other sections of the survey are defined in the Glossary.

Altavista Series

The Altavista series consists of deep, moderately well drained, strongly acid or very strongly acid soils on low stream terraces. The surface layer of these soils is grayish-brown to dark yellowish-brown fine sandy loam, and the subsoil is light olive-brown to yellowish-brown sandy clay loam to sandy clay. These soils are mottled below a depth of 23 inches.

Altavista soils are associated with the well-drained, yellowish-red Wickham soils, the somewhat poorly drained Augusta soils, and the poorly drained Roanoke soils. The Altavista soils in this county occur mostly as small spots in the northeastern corner along the Little Tallapoosa River, but there are also scattered spots along the larger creeks throughout the county. Almost all of the acreage has been cleared and is now in cultivated crops or in pasture. Small areas that have been left idle support good stands of loblolly pine.

The original vegetation consisted of oak, hickory, dogwood, poplar, sourwood, gum, and some pine.

TABLE 1.—*Approximate acreage and proportionate extent of the soils*

Soil	Acres	Percent
Altavista fine sandy loam, 2 to 6 percent slopes	473	0.1
Altavista fine sandy loam, 0 to 2 percent slopes	192	.1
Altavista gravelly fine sandy loam, 2 to 6 percent slopes	287	.1
Altavista gravelly fine sandy loam, 6 to 10 percent slopes, eroded	203	.1
Appling sandy loam, 2 to 6 percent slopes, eroded	328	.1
Appling sandy loam, 6 to 10 percent slopes, eroded	725	.2
Appling gravelly sandy loam, 2 to 6 percent slopes, eroded	1,208	.3
Appling gravelly sandy loam, 6 to 10 percent slopes, eroded	4,530	1.2
Augusta fine sandy loam, 0 to 2 percent slopes	279	.1
Augusta fine sandy loam, 2 to 6 percent slopes	337	.1
Buncombe loamy sand	1,006	.3
Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded	472	.1
Cecil gravelly sandy loam, 6 to 10 percent slopes, eroded	1,522	.4
Cecil gravelly sandy loam, 10 to 15 percent slopes, eroded	791	.2
Cecil gravelly clay loam, 2 to 6 percent slopes, severely eroded	242	.1
Cecil gravelly clay loam, 6 to 10 percent slopes, severely eroded	2,701	.7
Cecil gravelly clay loam, 10 to 15 percent slopes, severely eroded	2,215	.6
Cecil gravelly clay loam, 15 to 25 percent slopes, severely eroded	336	.1
Cecil-Madison-Urban land complex	1,344	.4
Chewacla silt loam	2,409	.6
Congaree silt loam	655	.2
Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded	197	.1
Davidson gravelly sandy loam, 6 to 10 percent slopes, eroded	1,009	.3
Davidson gravelly sandy loam, 10 to 15 percent slopes, eroded	834	.2
Davidson gravelly sandy loam, 15 to 25 percent slopes, eroded	130	(1)
Davidson gravelly clay loam, 2 to 6 percent slopes, severely eroded	215	.1
Davidson gravelly clay loam, 6 to 10 percent slopes, severely eroded	1,112	.3
Davidson gravelly clay loam, 10 to 15 percent slopes, severely eroded	909	.2
Gullied land	123	(1)
Hulett gravelly fine sandy loam, 6 to 10 percent slopes	118	(1)
Hulett gravelly fine sandy loam, 2 to 6 percent slopes, eroded	398	.1
Hulett gravelly fine sandy loam, 6 to 10 percent slopes, eroded	764	.2
Louisa stony sandy loam, 15 to 40 percent slopes	78,412	21.1
Louisa stony sandy loam, 10 to 15 percent slopes	2,910	.8
Louisa stony sandy clay loam, 6 to 10 percent slopes, eroded	842	.2
Louisa stony sandy clay loam, 10 to 15 percent slopes, eroded	1,620	.4
Louisa stony sandy clay loam, 15 to 40 percent slopes, eroded	3,024	.8
Louisa gravelly sandy loam, 6 to 10 percent slopes	1,576	.4
Louisa gravelly sandy loam, 10 to 15 percent slopes	7,270	2.0
Louisa gravelly sandy loam, 15 to 40 percent slopes	48,468	13.0
Louisa slaty loam, 10 to 15 percent slopes	1,354	.4
Louisa slaty loam, 15 to 40 percent slopes	20,354	5.5
Louisburg stony sandy loam, 6 to 10 percent slopes, eroded	427	.1
Louisburg stony sandy loam, 10 to 25 percent slopes, eroded	1,703	.5
Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded	3,800	1.0
Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded	30,525	8.2
Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded	19,961	5.4
Madison gravelly fine sandy loam, 15 to 25 percent slopes, eroded	770	.2
Madison gravelly clay loam, 2 to 6 percent slopes, severely eroded	1,068	.3
Madison gravelly clay loam, 6 to 10 percent slopes, severely eroded	27,107	7.3
Madison gravelly clay loam, 10 to 15 percent slopes, severely eroded	35,630	9.6
Madison gravelly clay loam, 15 to 25 percent slopes, severely eroded	441	.1
Mantachie fine sandy loam	18,998	5.1
Ochlockonee fine sandy loam	5,228	1.4
Ochlockonee fine sandy loam, local alluvium	2,509	.7
Pacolet sandy loam, 6 to 10 percent slopes, eroded	522	.1
Pacolet sandy loam, 10 to 15 percent slopes, eroded	432	.1
Pacolet sandy loam, 15 to 25 percent slopes, eroded	205	.1
Pacolet clay loam, 6 to 15 percent slopes, severely eroded	218	.1
Roanoke silt loam	245	.1
Rock land	414	.1
Stony rough land	1,993	.5
Terrace escarpment	478	.1
Wedowee gravelly sandy loam, 6 to 10 percent slopes, eroded	449	.1
Wedowee gravelly sandy loam, 10 to 15 percent slopes, eroded	5,581	1.5
Wedowee gravelly sandy loam, 15 to 25 percent slopes, eroded	883	.2
Wedowee gravelly sandy clay loam, 6 to 10 percent slopes, severely eroded	1,070	.3
Wedowee gravelly sandy clay loam, 10 to 15 percent slopes, severely eroded	2,234	.6
Wedowee gravelly sandy clay loam, 15 to 25 percent slopes, severely eroded	432	.1
Wehadkee fine sandy loam	779	.2
Wehadkee and Mantachie soils	8,722	2.3
Wickham fine sandy loam, 2 to 6 percent slopes, eroded	1,048	.3
Wickham fine sandy loam, 6 to 10 percent slopes, eroded	874	.2
Wickham fine sandy loam, 10 to 15 percent slopes, eroded	344	.1
Wickham gravelly fine sandy loam, 6 to 10 percent slopes, eroded	1,188	.3
Wickham gravelly fine sandy loam, 10 to 15 percent slopes, eroded	662	.2
Wilkes sandy loam, 6 to 10 percent slopes, eroded	375	.1
Wilkes stony sandy loam, 10 to 15 percent slopes, eroded	547	.2
Made land	13	(1)
Mines and pits	71	(1)
Total	371,840	100.0

[1] Less than 0.05 percent.

Altavista fine sandy loam, 2 to 6 percent slopes (AaB).—This is a moderately well drained soil on low stream terraces. The main layers of a typical profile are—

0 to 6 inches, dark yellowish-brown, very friable fine sandy loam.
6 to 44 inches, yellowish-brown, friable sandy clay loam.
44 inches +, highly mottled, massive sandy clay.

In places this soil is underlain by gravel, clay, or old residual soil material. Included in mapping were small areas of Wickham soils and small areas of eroded soils that have a surface layer of yellowish-brown sandy clay loam.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth and responds to fertilization and management. It is suited to all crops and pasture grasses grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage is in pasture or in row crops. Erosion is a major hazard in cultivated areas. (Capability unit IIe–32; woodland group 1; wildlife group 1)

Altavista fine sandy loam, 0 to 2 percent slopes (AaA).—This is a moderately well drained soil on low stream terraces. It is subject to occasional overflow. The surface layer is dark grayish brown, is very friable, and is 8 to 12 inches thick. The subsoil is yellowish-brown, friable sandy clay loam 20 to 40 inches thick. Included in mapping were small areas of Augusta soils and small areas of soils that have gravel on the surface.

Runoff is slow, permeability is moderate, and the available water capacity is moderately high. Natural fertility is moderate, and the supply of organic matter is low.

This soil has good tilth and can be worked throughout a wide range of moisture content without clodding and crusting. It responds to fertilization and management and is suited to a wide range of crops. Roots and water easily penetrate the subsoil. Most of the acreage is in pasture or in row crops. Water that ponds after heavy rains is a hazard in cultivated fields. (Capability unit IIw–31; woodland group 1; wildlife group 1)

Altavista gravelly fine sandy loam, 2 to 6 percent slopes (AgB).—This is a moderately well drained soil on low stream terraces. The surface layer is grayish brown to dark grayish brown and is 5 to 10 inches thick. This layer is 20 to 40 percent rounded quartz gravel. The subsoil is yellowish-brown, friable sandy clay loam 20 to 39 inches thick. In places this soil is underlain by sand, gravel, clay, or old residual soil material. Included in mapping were small areas of Wickham soils, which make up less than 10 percent of the total acreage, and small areas of eroded soils.

Permeability is moderate, infiltration is medium, and the available water capacity is moderately high. Natural fertility is moderate, and the supply of organic matter is low.

This soil has good tilth. It responds to fertilization and management and is well suited to all crops and pasture grasses grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage is in pasture or in row crops. The gravel in the surface layer interferes with cultivation. Erosion is the major hazard in cultivated areas. (Capability unit IIe–32; woodland group 1; wildlife group 1)

Altavista gravelly fine sandy loam, 6 to 10 percent slopes, eroded (AgC2).—This is a moderately well drained soil on low stream terraces. The surface layer is dark grayish brown to light olive brown and is 3 to 6 inches thick. It is 20 to 30 percent rounded quartz gravel. In only 5 percent of the acreage is this layer free of gravel. The subsoil is yellowish-brown, friable sandy clay loam 18 to 36 inches thick. In a few severely eroded spots, the subsoil is exposed. In places this soil is underlain by sand and gravel at a depth of 3 to 5 feet. Included in mapping were small areas of Wickham soils.

Runoff is medium, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. Natural fertility is moderate, and the supply of organic matter is low.

Except in severely eroded areas, this soil has good tilth. It responds to fertilization and management and is well suited to all crops and grasses grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage is in pasture or in row crops. The gravel in the surface layer interferes with cultivation. Erosion is the major hazard in cultivated areas. (Capability unit IIIe–32; woodland group 1; wildlife group 1)

Appling Series

The Appling series consists of moderately deep to deep, well-drained, strongly acid or very strongly acid soils of the Piedmont Plateau. In areas that are not severely eroded, the surface layer is very friable, grayish-brown sandy loam. The subsoil is friable, yellowish-brown to yellowish-red sandy clay or sandy clay loam. Most soils of this series have quartz and quartzite fragments up to 3 inches in diameter on the surface and in places throughout the profile.

Appling soils are associated with Cecil, Madison, Louisburg, and Louisa soils. They occur as small areas throughout the county and are extensive in the southern half. In the southeastern corner, near Rock Mills, these soils have a coarser textured subsoil. Most of the acreage was once cleared and in row crops or in pasture. More than half of it has been taken out of cultivation and now supports good stands of mixed pine.

The original vegetation consisted of oak, hickory, poplar, chestnut, sourwood, and pine.

Appling sandy loam, 2 to 6 percent slopes, eroded (ApB2).—This is a deep, well-drained, upland soil. The main layers of a typical profile are—

0 to 6 inches, dark grayish-brown, very friable gravelly sandy loam.
6 to 13 inches, yellowish-brown, very friable gravelly loam.
13 to 41 inches, strong-brown, friable sandy clay.
41 to 67 inches, yellowish-red, firm, massive sandy clay.
67 to 77 inches, mottled, firm, massive sandy loam.

In severely eroded areas the surface layer is yellowish-brown sandy clay loam. Included in mapping were areas where this layer is gravelly coarse sandy loam.

Runoff is medium, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

Except in severely eroded areas, this soil has good tilth. It responds to management and is well suited to all crops grown in the county. Runoff is a slight hazard. (Capability unit IIe–32; woodland group 1; wildlife group 1)

Appling sandy loam, 6 to 10 percent slopes, eroded (ApC2).—This is a deep, well-drained soil on uplands. The surface layer is grayish brown to light yellowish brown and is 3 to 6 inches thick. The subsoil is friable, yellowish-brown to yellowish-red sandy clay. Included in mapping were small areas of Cecil soils and some severely eroded areas where the surface layer is yellowish-brown sandy clay loam.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

Except in severely eroded areas, this soil has good tilth. It responds to fertilization and management and is suited to a wide range of crops. The root zone is thick. Most of the acreage has been cleared and cultivated. About half of it is in row crops, and the rest is in pasture or in forest. (Capability unit IIIe–32; woodland group 1; wildlife group 1)

Appling gravelly sandy loam, 2 to 6 percent slopes, eroded (AlB2).—This is a deep, well-drained soil on uplands. The surface layer is grayish brown to light yellowish brown. In most places it is 3 to 6 inches thick, but on about 10 percent of the acreage it is 7 to 10 inches thick. This layer is 15 to 25 percent angular quartz gravel. The subsoil is yellowish-brown to yellowish-red sandy clay. Included in mapping were small areas of Cecil soils and small areas of severely eroded soils.

Infiltration is medium, and permeability is moderate. The supply of organic matter is low, and natural fertility is moderate.

This soil is well suited to all crops grown in the county. Most of the acreage has been cleared and is in pasture or in row crops. (Capability unit IIe–32; woodland group 1; wildlife group 1)

Appling gravelly sandy loam, 6 to 10 percent slopes, eroded (AlC2).—This is a deep, well-drained soil on uplands. Scattered on the surface are angular quartz fragments up to 3 inches in diameter. The surface layer is grayish brown to olive brown. In places the texture is gravelly fine sandy loam. The subsoil is yellowish-brown to yellowish-red sandy clay loam or sandy clay.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil responds to management and is well suited to all crops grown in the county. Most of the acreage has been cleared and is in crops or in pasture. The rest is in forest, mainly loblolly pine. The quartz fragments on the surface interfere with cultivation. Erosion is the main hazard in cultivated areas. (Capability unit IIIe–32; woodland group 1; wildlife group 1)

Augusta Series

The Augusta series consists of somewhat poorly drained soils on low stream terraces of the Piedmont Plateau. The slope range is 0 to 6 percent. The surface layer is grayish-brown to olive-gray fine sandy loam, and the subsoil is light olive-brown to pale-olive, mottled sandy clay.

Augusta soils are associated with Altavista, Roanoke, Chewacla, and Congaree soils. In this county they occur along the larger streams and are flooded during prolonged periods of heavy rainfall. Most of the acreage has been cleared and is in pasture or in cultivated crops.

The natural vegetation consists of bay, red maple, willow, gum, wetland oak, alder, and a few pine trees.

Augusta fine sandy loam, 0 to 2 percent slopes (AuA).—This is a somewhat poorly drained soil on low stream terraces. The main layers of a typical profile are—

0 to 7 inches, grayish-brown, very friable fine sandy loam.
0 to 31 inches, mottled grayish-brown, yellowish-brown, and pale-olive, friable sandy clay; mottling increases with increasing depth.
31 to 43 inches +, gleyed, light-gray, firm sandy clay.

The surface layer is very dark gray in wooded areas because of the additional organic matter. The depth to unconsolidated material ranges from 40 to more than 60 inches.

Runoff is slow, infiltration is medium, permeability is slow, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth but is suited to only a narrow range of crops because of somewhat poor drainage. The water table is high, and water ponds after heavy rains. Most of the acreage has been cleared and cultivated but is now in pasture or in pine forest. (Capability unit IIIw–31; woodland group 6; wildlife group 4)

Augusta fine sandy loam, 2 to 6 percent slopes (AuB).—This is a somewhat poorly drained soil on low stream terraces. The surface layer is olive gray to grayish brown, is very friable, and is 6 to 10 inches thick. The subsoil is mottled pale-olive, brownish-gray, yellowish-brown, and gray sandy clay.

Runoff is medium, infiltration is medium, permeability is slow, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth and responds to fertilization but is suited to only a narrow range of crops because of somewhat poor drainage. It is subject to occasional overflow, but the water does not pond. Most of the acreage has been cleared and cultivated. Much of it is now in pasture or in pine forest. (Capability unit IIIw–31; woodland group 6; wildlife group 4)

Buncombe Series

The Buncombe series consists of deep, coarse-textured, well-drained to excessively drained soils. These soils are subject to overflow. The surface layer is loose, dark-brown loamy sand. The subsoil is loose, very dark grayish-brown to yellowish-brown loamy sand.

Buncombe soils are associated with the well drained Congaree soils, the moderately well drained Chewacla soils, and the poorly drained Wehadkee soils. The Buncombe soils in this county occur as natural levees along the major streams. Almost all of the acreage was once cleared and in row crops or in pasture. Now most of it is in pasture or in pine forest. The total acreage is small.

The original vegetation consisted of yellow-poplar, gum, red maple, and associated hardwoods.

Buncombe loamy sand (Bu).—This is a deep, excessively drained soil on first bottoms. The slope range is 0 to 6 percent. The main layers of a typical profile are—

0 to 8 inches, dark-brown, loose loamy sand.
8 to 32 inches, very dark grayish-brown, loose loamy sand.
32 to 60 inches +, yellowish-brown, loose loamy fine sand.

The depth to beds of stratified sand and gravel ranges from 3 to 7 feet.

Runoff is slow, infiltration is rapid, permeability is very rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth but is suited to only a narrow range of crops because of droughtiness. Most of the acreage has been cleared and cultivated but is now pasture or in loblolly pine forest. (Capability unit IIIs–31; woodland group 7; wildlife group 3)

Cecil Series

The Cecil series consists of deep, well-drained, strongly acid to very strongly acid soils of the Piedmont Upland. The slope range is 2 to 25 percent. The surface layer is dark grayish-brown to dark-brown, very friable sandy loam or clay loam. The subsoil is red clay. Most soils of this series have quartz gravel up to 3 inches in diameter on the surface.

Cecil soils are closely associated with Madison, Davidson, Appling, and Louisburg soils. They are extensive throughout the southeastern half of this county. Most of the acreage was once cleared and cultivated. Now about half of it has reverted to woods, primarily pine trees. The rest is in cultivated crops, hay crops, or pasture.

The original vegetation consisted of oak, hickory, chestnut, dogwood, and pine.

Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded (CgB2).—This soil is deep and well drained. The main layers of a typical profile are—

0 to 6 inches, brown, very friable gravelly sandy loam.
6 to 62 inches, red, friable to firm clay.
62 to 77 inches +, red clay loam derived from highly weathered granitic material; contains numerous small mica flakes.

In a few spots where erosion is severe, the present surface layer is yellowish-red sandy clay loam or clay loam. Included in mapping were areas of Davidson and Appling soils, which make up less than 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth except in severely eroded areas, and it can be worked throughout a wide range of moisture content. It responds to lime and fertilizer and is well suited to all crops grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage has been cleared and is in row crops or in pasture. Erosion is the major hazard in cultivated areas. (Capability unit IIe–31; woodland group 1; wildlife group 1)

Cecil gravelly sandy loam, 6 to 10 percent slopes, eroded (CgC2).—This soil is deep and well drained. The surface layer is grayish brown to dark brown, is friable, and is 4 to 6 inches thick. The subsoil is red clay to clay loam to a depth of about 50 inches. Included in mapping were areas of Appling and Davidson soils, which make up less than 10 percent of the total acreage. Also included were severely eroded areas where the surface layer is yellowish-red clay loam.

Permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth except in severely eroded areas and can be worked throughout a wide range of moisture content. It responds to fertilization and management and is well suited to all crops grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage has been cleared and is in row crops or in pasture. Erosion is a major hazard in cultivated areas. (Capability unit IIIe–31; woodland group 1; wildlife group 1)

Cecil gravelly sandy loam, 10 to 15 percent slopes, eroded (CgD2).—This soil is well drained. The surface layer is grayish brown to dark brown, is friable, and is 4 to 6 inches thick. The subsoil is red clay to a depth of about 48 inches. Included in mapping were areas of Appling and Davidson soils, which make up less than 10 percent of the total acreage. Also included were severely eroded areas where the surface layer is yellowish-red clay loam.

Runoff is rapid, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth except in severely eroded areas and can be worked throughout a wide range of moisture content. It responds to fertilization and management. Roots and water easily penetrate the subsoil. Most of the acreage has been cleared and cultivated, but now a large part is in pasture or in pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IVe–31; woodland group 1; wildlife group 1)

Cecil gravelly clay loam, 2 to 6 percent slopes, severely eroded (CeB3).—This is a well-drained soil. The surface layer is brown to yellowish red, is friable, and is 3 to 5 inches thick. The subsoil is red clay to clay loam to a depth of about 48 inches. Rills and shallow gullies are common, and there are a few deep gullies. Included in mapping were small areas of soils that are less severely eroded and have a thicker, darker colored surface layer. Also included were areas of Appling and Davidson soils, which make up less than 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without baking and clodding. Its response to fertilization and management is only fair. If limed and fertilized it is well suited to most pasture plants. Roots and water easily penetrate the subsoil. The entire acreage was once cleared and cultivated. Now a large part of it is in pasture or in pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IIIe-331; woodland group 2; wildlife group 1)

Cecil gravelly clay loam, 6 to 10 percent slopes, severely eroded (CeC3).—This is a deep, well-drained soil. The surface layer is brown to yellowish red, is friable, and is 3 to 5 inches thick. The subsoil is red clay to a depth of about 46 inches. Rills and shallow gullies are common, and there are a few deep gullies. Included in mapping were small areas that are less severely eroded than this soil and have a thicker, darker colored surface layer.

Also included were areas of Appling and Davidson soils, which make up less than 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. Its response to fertilization and management is only fair. If limed and fertilized, it is well suited to most pasture plants. Roots and water easily penetrate the subsoil. The entire acreage was once cleared and cultivated. Now a large part of it is in pasture or in pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IVe–331; woodland group 2; wildlife group 1)

Cecil gravelly clay loam, 10 to 15 percent slopes, severely eroded (CeD3).—This is a deep, well-drained soil. The surface layer is brown to yellowish red and is 3 to 5 inches thick. The subsoil is red clay to a depth of about 40 inches. Rills and shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Appling and Davidson soils, which make up less than 10 percent of the total acreage.

Runoff is rapid, permeability is slow, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. Roots and water easily penetrate the subsoil. The entire acreage was once cleared and cultivated, but now a large part of it is in pasture or in pine forest. Erosion is a major hazard in cultivated areas. (Capability unit VIe–331; woodland group 2; wildife group 1)

Cecil gravelly clay loam, 15 to 25 percent slopes, severely eroded (CeE3).—This soil is well drained. The surface layer is ordinarily brown to yellowish red and is 2 to 4 inches thick. In some areas it is gravelly sandy loam 4 to 6 inches thick. The subsoil is red clay to a depth of about 38 to 40 inches. Rills and shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of Gullied land where most of the subsoil has eroded away. Also included were areas of Appling and Louisburg soils, which make up about 10 percent of the total acreage.

Runoff is very rapid, permeability is slow, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

Roots and water penetrate the subsoil of this soil fairly easily. The entire acreage was once cleared and in pasture or in cultivated crops. Now a large part of it is in pine forest. The erosion hazard is severe. (Capability unit VIIe–331; woodland group 2; wildlife group 1)

Cecil-Madison-Urban land complex (Cm).—This complex is 65 percent Cecil soils and 35 percent Madison soils. It occurs mainly in the Roanoke and Wadley metropolitan areas. The slope range is 2 to 15 percent.

More than half of this complex consists of soils that have been prepared as sites for buildings, paved streets, parking lots, and other urban development. These soils have been cut, filled, and so thoroughly reworked that soil identification is difficult. The areas that have not been disturbed by earthmoving equipment make up 40 percent of the complex.

Cecil soils are described under the heading "Cecil Series," and Madison soils are described under the heading "Madison Series."

These soils have slight limitations as support for foundations and moderate limitations as sewage disposal fields. The C horizon of both soils is well suited to use as road base material, but the B horizon, because of its higher clay content, has serious limitations for such use. Lawns are difficult to establish in cut areas and require a topdressing of soil or mulch; fertilizer and lime are needed for good stands. (Capability unit IVe–31)

Chewacla Series

The Chewacla series consists of deep, moderately well drained and somewhat poorly drained soils. These soils are subject to overflow, mainly in winter. The surface layer is brown to dark-brown silt loam. The subsurface layers are yellowish-brown to dark-brown loam to silty clay loam.

Chewacla soils are associated with the better drained Congaree soils, the coarser textured, excessively drained Buncombe soils, and the poorly drained Wehadkee soils.

Chewacla soils occur on nearly level first bottoms along the rivers and larger creeks throughout the county. Much of the acreage is cleared and is in cultivated crops or in pasture. The rest is in woodland, chiefly wetland hardwoods.

The original vegetation consisted of yellow-poplar, gum, red maple, birch, willow, and some pine.

Chewacla silt loam (Cn).—This is a moderately well drained and somewhat poorly drained soil. The slope range is 0 to 2 percent. The main layers of a typical profile are—

0 to 9 inches, dark-brown, friable silt loam.
9 to 18 inches, brown, friable silt loam; few, fine, faint mottles in lower part.
18 to 60 inches, mottled dark yellowish-brown and grayish-brown loam; many fine mica flakes.

The depth to mottling ranges from 10 to 24 inches. Included in the areas mapped, and making up 15 to 25 percent of the total acreage, are soils that have a siltier profile than this soil. Also included are small areas of Congaree soils and small areas where the surface layer is fine sandy loam. Thin strata of sand and silt are common throughout the profile. Mica flakes also are common throughout the profile but are more abundant in the included siltier soils.

Runoff is slow, and permeability is moderate. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth and responds to fertilization. It is one of the most productive soils in the county for corn, hay, and pasture grasses. Most of the acreage has been cleared and is in cultivated crops or in pasture. Flooding is a major hazard. (Capability unit IIIw–32; woodland group 5; wildlife group 3)

Congaree Series

The Congaree series consists of deep, well-drained, strongly acid or very strongly acid soils. These soils are subject to overflow. The surface layer is friable, brown to dark-brown loam or silt loam. The subsurface layers are friable, brown to yellowish-brown sandy loam to silt loam.

Congaree soils are associated with the coarser textured, excessively drained Buncombe soils, the moderately well drained Chewacla soils, and the poorly drained Wehadkee soils.

Congaree soils occur on nearly level first bottoms along the rivers and larger creeks of the county. Almost all of the acreage was once cleared and in cultivated crops. Now about 50 percent of it is in cultivated crops, about 25 percent is in pasture, and the rest is in forest. The trees are mainly loblolly pine, but there are a few hardwoods.

The original vegetation consisted of yellow-poplar, gum, red maple, and associated hardwoods.

Congaree silt loam (Co).—This is a well-drained soil. The slope range is 0 to 2 percent. The main layers of a typical profile are—

0 to 24 inches, brown, friable silt loam.
24 to 56 inches +, dark yellowish-brown, very friable fine sandy loam.

This soil is 30 to 60 inches deep. The thickness of each layer varies considerably, and the profile contains strata of sand and silt. In most places small mica flakes are abundant throughout the profile. Included in the areas mapped, and making up less than 10 percent of the total acreage, are soils that have a silty profile and contain more mica than this soil.

Runoff is slow, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth and responds to fertilization. It is one of the most productive soils in the county. Most of the acreage is either in corn or in pasture grasses. Flooding of short duration is the major hazard. (Capability unit IIw–32; woodland group 5; wildlife group 3)

Davidson Series

This series consists of well-drained, strongly acid soils on uplands. The slope range is 2 to 25 percent. Normally, the surface layer of these soils is dark reddish-brown gravelly sandy loam or gravelly clay loam and the subsoil is dark-red sandy clay to clay.

Davidson soils are closely associated with Cecil and Madison soils. They are generally in the eastern half of the county but occur as small, scattered areas in all parts. Most of the acreage has been cleared and cultivated. The steeper slopes are now reseeded to pine, and the rest is either in cultivated crops or in pasture.

The original vegetation consisted of hickory, chestnut, white oak, red oak, and a few other species of oak, and included practically no pine.

Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded (DgB2).—This is a well-drained soil. The main layers of a typical profile are—

0 to 6 inches, dark reddish-brown, very friable gravelly sandy loam.
6 to 36 inches, dark-red, friable clay.
36 to 40 inches +, partly weathered, yellow hornblende schist that crushes to clay loam.

Included in mapping were areas of Cecil and Madison soils, which make up less than 10 percent of the total acreage, and some severely eroded areas where the surface layer is gravelly clay loam and is only 2 to 4 inches thick.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth and can be worked throughout a wide range of moisture content without clodding or crusting. It responds to fertilization and management and is suited to a wide range of crops. Most of the acreage has been cleared and cultivated. Erosion is the major hazard in cultivated areas. (Capability unit IIe–31; woodland group 1; wildlife group 1)

Davidson gravelly sandy loam, 6 to 10 percent slopes, eroded (DgC2).—This is a well-drained soil. The surface layer is dark reddish brown to reddish brown, is friable, and is 4 to 6 inches thick. The subsoil is red, friable clay to a depth of about 25 to 45 inches. Included in mapping were small areas of Madison and Cecil soils and some severely eroded areas where the surface layer is reddish-brown clay loam.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth and can be worked throughout a wide range of moisture content. It responds to fertilization and management and is suited to a wide range of crops. Most of the acreage was once cleared and cultivated. Now about half of the acreage is in row crops, and the rest is either in pasture or in loblolly pine forest. Erosion is the major hazard in cultivated areas. (Capability unit IIIe–31; woodland group 1; wildlife group 1)

Davidson gravelly sandy loam, 10 to 15 percent slopes, eroded (DgD2).—This is a well-drained soil. The surface layer is dark reddish brown to reddish brown, is very friable, and is 4 to 6 inches thick. The subsoil is red, friable clay to a depth of about 22 to 45 inches. Included in mapping were small areas of Madison and Cecil soils and some severely eroded areas where the surface layer is reddish-brown clay loam.

Runoff is rapid, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth and can be worked throughout a wide range of moisture content without clodding and crusting. It responds to fertilization and management. Most of the acreage has been cleared and cultivated, but a large part is now in pasture or in loblolly pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IVe–31; woodland group 1; wildlife group 1)

Davidson gravelly sandy loam, 15 to 25 percent slopes, eroded (DgE2).—This is a well-drained soil. The surface layer is dark reddish brown to reddish brown, is very friable, and is 4 to 6 inches thick. The subsoil is red, friable clay to a depth of about 22 to 45 inches. Included in mapping were some severely eroded areas where the surface layer is reddish-brown clay loam. Also included were small areas of Madison and Cecil soils.

Runoff is very rapid, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth. It responds to fertilization and management, but because of steep slopes, it is better suited to pasture or woodland than to cultivated crops.

Most of the acreage has been cleared, but a large part of it is now in loblolly pine forest or in pasture. Erosion is a severe hazard. (Capability unit VIe–31; woodland group 1; wildlife group 1)

Davidson gravelly clay loam, 2 to 6 percent slopes, severely eroded (DaB3).—This is a well-drained soil. The surface layer is reddish brown to yellowish red, is friable, and is 2 to 4 inches thick. The subsoil is red clay to a depth of about 22 to 40 inches. Shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Cecil and Madison soils, which make up less than 15 percent of the total acreage.

Infiltration is slow, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and baking. Its response to fertilization and management is only fair. It is suited to a fairly wide range of crops. All of the acreage has been cleared and row cropped, but now a large part of it is in pasture or in pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IIIe–331; woodland group 2; wildlife group 1)

Davidson gravelly clay loam, 6 to 10 percent slopes, severely eroded (DaC3).—This is a well-drained soil. The surface layer is reddish brown to yellowish red, is friable, and is 2 to 4 inches thick. The subsoil is red clay to a depth of about 22 to 40 inches. Shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Cecil and Madison soils, which make up less than 15 percent of the total acreage.

Infiltration is slow, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. Its response to fertilization and management is fair. It is suited to a fairly wide range of crops. All of the acreage has been cleared and cultivated, but now a large part of it is in pasture or in loblolly pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IVe–331; woodland group 2; wildlife group 1)

Davidson gravelly clay loam, 10 to 15 percent slopes, severely eroded (DaD3).—This soil is well drained. The surface layer is reddish brown to yellowish red, is friable, and is 2 to 4 inches thick. The subsoil is red clay to a depth of about 20 to 40 inches. Shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were small areas of Madison and Cecil soils.

Runoff is rapid, infiltration is slow, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth. Its response to fertilization and management is fair, and it is suited to a fairly wide range of crops. All of the acreage has been cleared and cultivated, but now a large part of it is in pasture or in loblolly pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IVe–331; woodland group 2; wildlife group 1)

Gullied Land

Gullied land (Gu) consists of a network of deep gullies (fig. 4) that cut into the parent material and cannot be crossed by farm machinery. Before the profiles were destroyed, this land consisted of Appling, Cecil, Madison, Louisa, Davidson, and other soils of the Piedmont Upland. Now, little of the original soil material remains. Profiles have been completely destroyed except in the small islands between gullies. These islands make up less than 3 percent of the total acreage. The parent material is exposed over some entire areas. In places there are stones and gravel. Gullied land occurs throughout the county. (Capability unit VIIe–333)

Hulett Series

The Hulett series consists of well-drained, moderately deep soils. The slope range is 2 to 10 percent. The surface layer is light yellowish-brown to grayish-brown, very friable fine sandy loam. The subsoil is yellowish-brown, friable clay. On a large part of the acreage, there is quartz gravel up to 3 inches in diameter on the surface.

Hulett soils are associated chiefly with Appling, Wedowee, and Madison soils. In this county they occur mainly as fairly broad ridges on the Piedmont Upland. They have sufficient mica in the subsoil to give them a slick, greasy feel.

Hulett gravelly fine sandy loam, 6 to 10 percent slopes (HuC).—This is a deep, well-drained soil in the northern part of the county. The main layers of a typical profile are—

0 to 13 inches, light yellowish-brown, very friable gravelly fine sandy loam.
13 to 39 inches, yellowish-brown, friable clay; small mica flakes give soil a slick, greasy feel.
39 to 42 inches +, partly weathered graphitic schist.

Included in mapping were areas of Madison soils, which make up about 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

Figure 4.—**Network of deep gullies (Appling soil material).**

This soil has good tilth. It responds to fertilization and management and is suited to a wide range of crops. The root zone is thick. Much of the acreage is in hardwood forest. About half of the acreage that is cleared is in row crops, and the rest is in pasture. (Capability unit IIIe–32; woodland group 1; wildlife group 1)

Hulett gravelly fine sandy loam, 2 to 6 percent slopes, eroded (HuB2).—This is a deep, well-drained, upland soil in the northern part of the county. The surface layer is grayish brown to yellowish brown and is 4 to 6 inches thick. The subsoil is yellowish-brown to yellowish-red clay 24 to 38 inches thick. Included in mapping were severely eroded areas where the surface layer is yellowish-brown sandy clay loam. Also included were areas of Madison soils, which make up 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth. It responds to fertilization and management and is suited to a wide range of crops. The root zone is thick. Most of the acreage is in row crops. (Capability unit IIe–32; woodland group 1; wildlife group 1)

Hulett gravelly fine sandy loam, 6 to 10 percent slopes, eroded (HuC2).—This is a deep, well-drained, upland soil in the northern part of the county. The surface layer is grayish brown to yellowish brown and is 4 to 6 inches thick. The subsoil is yellowish-brown to yellowish-red clay 18 to 36 inches thick. Included in mapping were some severely eroded areas where the surface layer is yellowish-brown sandy clay loam. Also included were areas of Madison soils, which make up about 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth. It responds to fertilization and management and is suited to a fairly wide range of crops. The root zone is thick. Most of the acreage has been cleared and cultivated. About 50 percent of it is now in row crops. The rest is in pasture and in woodland, in about equal proportions. (Capability unit IIIe–32; woodland group 1; wildlife group 1)

Louisa Series

The Louisa series consists of shallow, well-drained, strongly acid or very strongly acid soils. The slope range is 6 to 40 percent. The surface layer is gravelly sandy loam, stony sandy loam, slaty loam, or stony sandy clay loam. In some places it is underlain by a thin layer of red or yellowish-red clay loam, and in others by yellowish-brown loam. The subsoil horizons are weakly expressed.

Louisa soils are closely associated with Madison, Cecil, and Appling soils. They are extensive throughout the western part of this county and occur as sizable areas in the northern and eastern parts. About half of the acreage has been cleared and cultivated, but most of this has reverted to woodland, mainly pine trees. The rest of the cleared acreage is in pasture grasses or in hay crops.

The original vegetation consisted chiefly of blackjack oak, scarlet oak, and other varieties of oak, and included some chestnut, hickory, and pine, mainly loblolly pine. There were many blueberry vines and also some mountain-laurel on the steep northern slopes.

Louisa stony sandy loam, 15 to 40 percent slopes (LtE).—This is a shallow, well-drained soil. The main layers of a typical profile are—

0 to 3 inches, brown, very friable stony sandy loam.
3 to 9 inches, yellowish-brown, very friable sandy loam.
9 to 24 inches, yellowish-brown loam; 50 percent schist fragments.

In places the surface layer is dark grayish-brown gravelly sandy loam and is 3 to 6 inches thick. Weathered schist extends to a depth of 10 feet or more. Included in mapping were some severely eroded areas where the surface layer is yellowish-red clay loam. Also included were areas of Stony rough land, which make up less than 10 percent of the total acreage.

Runoff is very rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is poorly suited to pasture grasses and cultivated crops. Most of the acreage is in pine and hardwood forest. The root zone is thin. Erosion is a severe hazard. (Capability unit VIIs–31; woodland group 3; wildlife group 2)

Louisa stony sandy loam, 10 to 15 percent slopes (LtD).—This is a shallow, well-drained soil. The surface layer is dark grayish brown to brown, is friable, and is 3 to 6 inches thick. It is underlain by yellowish-red to red clay loam. Weathered schist extends to a depth of 10 feet or more. Included in mapping were some severely eroded areas where the surface layer is reddish-brown, friable clay loam. Also included were areas of Madison soils, which make up about 10 percent of the total acreage.

Runoff is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is not suited to pasture grasses or cultivated crops unless stones are removed from the surface. Much of the acreage was once cleared but has reverted to loblolly pine. The root zone is thin. Erosion is a severe hazard. (Capability unit VIIs–31; woodland group 3; wildlife group 2)

Louisa stony sandy clay loam, 6 to 10 percent slopes, eroded (LsC2).—This is a shallow, well-drained soil. The surface layer is brown to yellowish red and is 2 to 4 inches thick. In places it is underlain by a thin layer of yellowish-red to red clay loam. Shallow gullies are common, and a few deep ones have formed. Weathered schist extends to a depth of 10 feet or more. Included in mapping were areas of Madison soils, which make up about 10 percent of the total acreage.

Infiltration is slow, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

Because of severe erosion, stones, and a thin root zone, this soil is poorly suited to cultivated crops or pasture grasses. Most of the acreage is now in pine forest. (Capability unit VIs–31; woodland group 4; wildlife group 2)

Louisa stony sandy clay loam, 10 to 15 percent slopes, eroded (LsD2).—This is a shallow, well-drained soil. The surface layer is brown to yellowish red and is 2 to 4 inches thick. It is underlain in places by a thin layer of yellowish-red to red clay loam. Weathered schist extends

to a depth of 10 feet or more. Shallow gullies are common, and a few deep ones have formed. Included in mapping were areas of Madison soils, which make up about 10 percent of the total acreage.

Runoff is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is not suited to cultivated crops or pasture grasses. Most of the acreage was once cleared, but much of it has reverted to loblolly pine forest. The root zone is thin. Erosion is a severe hazard. (Capability unit VIIs–332; woodland group 4; wildlife group 2)

Louisa stony sandy clay loam, 15 to 40 percent slopes, eroded (LsE2).—This is a shallow, well-drained soil. The surface layer is brown to yellowish red and is 2 to 4 inches thick. In places it is underlain by a thin layer of yellowish-red to red clay loam. Weathered schist extends to a depth of 10 feet or more. Shallow gullies are common, and a few deep ones have formed. Included in mapping were areas of Madison soils and Stony rough land, which together make up about 10 percent of the total acreage.

Runoff is very rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

Because of stones, severe erosion, and a thin root zone, this soil is not suited to cultivated crops or pasture grasses. Most of the acreage was once cleared. Now it is in loblolly pine forest. (Capability unit VIIs–332; woodland group 4; wildlife group 2)

Louisa gravelly sandy loam, 6 to 10 percent slopes (LgC).—This is a shallow, well-drained soil. The surface layer is dark grayish brown to reddish brown, is friable, and is 3 to 6 inches thick. The subsurface layer is yellowish-red to red clay loam that grades to weathered schist. The schist extends to a depth of 10 feet or more. Included in mapping were some severely eroded areas where the surface layer is yellowish-red clay loam. Also included were areas of Madison soils, which make up about 10 percent of the total acreage.

Infiltration is medium, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops but is fairly well suited to most pasture plants. Most of the acreage has been cleared and is in pasture. The root zone is thin. (Capability unit IVe–33; woodland group 3; wildlife group 2)

Louisa gravelly sandy loam, 10 to 15 percent slopes (LgD).—This is a shallow, well-drained soil. The surface layer is dark grayish brown to reddish brown, is friable, and is 3 to 6 inches thick. It is underlain by yellowish-red to red clay loam. Weathered schist extends to a depth of 10 feet or more. Included in mapping were some severely eroded areas where the surface layer is reddish-brown, friable sandy clay loam. Also included were areas of Madison soils, which make up about 10 percent of the total acreage.

Runoff is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops but is fairly well suited to most pasture plants grown in the county. Most of the acreage was once cleared, but now much of it is in pasture or in loblolly pine forest. The root zone is thin. Erosion is a severe hazard. (Capability unit VIe–32; woodland group 3; wildlife group 2)

Louisa gravelly sandy loam, 15 to 40 percent slopes (LgE).—This is a shallow, well-drained soil. The surface layer is dark grayish brown to reddish brown, is friable, and is 3 to 6 inches thick. It is underlain by strong-brown to yellowish-red clay loam. Weathered schist extends to a depth of 10 feet or more. Included in mapping were some severely eroded areas where the surface layer is yellowish-red clay loam. Also included were areas of Madison soils, which make up less than 10 percent of the total acreage.

Runoff is very rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is fairly well suited to most pasture plants. Most of the acreage was once cleared but is now in loblolly pine forest. Erosion is a severe hazard. (Capability unit VIIe–32; woodland group 3; wildlife group 2)

Louisa slaty loam 10 to 15 percent slopes (LoD).—This soil is shallow and well drained. It is shallower over bedrock than any of the Louisa soils previously described and contains fewer mica and more schist fragments than the Louisa gravelly and stony sandy loams. The surface layer is brown to dark yellowish brown, is friable, and is 3 to 6 inches thick. In most places this layer is underlain by weathered phyllite, which extends to a depth of 10 feet or more. There are phyllite and quartz fragments ⅛ inch to 6 inches in diameter on the surface and throughout the profile. The largest area of this soil occurs about 1 mile west of Wedowee, in a 1½-mile strip that extends from northeast to southwest. Included in mapping were areas of Madison soils, which make up about 10 percent of the total acreage.

Runoff is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops. Most of the acreage was once cleared, but much of it is now in pasture or in loblolly pine forest. The root zone is thin. Erosion is a severe hazard. (Capability unit VIe–32; woodland group 3; wildlife group 2)

Louisa slaty loam, 15 to 40 percent slopes (LoE).—This is a shallow, well-drained soil. It is shallower over bedrock than the Louisa gravelly and stony sandy loams and the Louisa stony sandy clay loams and contains fewer mica and more schist fragments than the Louisa gravelly and stony sandy loams. The surface layer is brown to dark yellowish brown, is friable, and is 3 to 6 inches thick. In most places this layer is underlain by weathered phyllite, which extends to a depth of 10 feet or more. There are phyllite and quartz fragments ⅛ inch to 6 inches in diameter on the surface and throughout the profile. Included in mapping were some severely eroded areas where the surface layer is yellowish-red clay loam. Also included were areas of Stony rough land, which make up about 10 percent of the total acreage.

Runoff is very rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is poorly suited to cultivated crops and pasture grasses. Most of the acreage was once cleared. Now much of it is in mixed pine and hardwood forest. The root zone is thin. Erosion is a severe hazard. (Capability unit VIIe-32; woodland group 3; wildlife group 2)

Louisburg Series

The Louisburg series consists of shallow, well-drained, strongly acid or very strongly acid soils of the Piedmont Plateau. The slope generally is between 6 and 25 percent, but in areas of escarpments it is as much as 35 percent. The surface layer of these soils is very dark grayish-brown to light olive-brown, friable stony sandy loam. In places it is underlain by a thin layer of yellowish-brown to yellowish-red sandy clay loam.

Louisburg soils are closely associated with Pacolet, Appling, and Wedowee soils. The total acreage of Louisburg soils is small in this county. The largest acreage is adjacent to the granitic outcrops near Rock Mills and about 3 miles north of Wadley. Many small areas occur near Blakes Ferry. About half of the acreage was once cleared, cultivated, and planted to corn, cotton, or pasture grasses. Now most of this acreage has been abandoned. It supports stands of loblolly pine and shortleaf pine.

The natural vegetation consisted mainly of blackjack oak and scarlet oak and included a few pine trees and other species of hardwood.

Louisburg stony sandy loam, 6 to 10 percent slopes, eroded (LuC2).—This soil is shallow and well drained. The main layers of a typical profile are—

0 to 4 inches, very dark grayish-brown, very friable stony sandy loam; 20 percent stones larger than 10 inches.
4 to 16 inches, grayish-brown, very friable stony sandy loam; 40 percent stones larger than 10 inches.
16 to 36 inches, light reddish-brown, saprolitic granitic material that crushes to sandy clay loam.

The depth to bedrock is generally 2 or 3 feet. Included in mapping were small areas of Pacolet and Wedowee soils.

Infiltration is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops. Part of the acreage was once cleared and cultivated. Now most of it is in pasture or in woodland. The root zone is thin. Erosion is a hazard in cultivated areas. (Capability unit VIs-31; woodland group 3; wildlife group 2)

Louisburg stony sandy loam, 10 to 25 percent slopes, eroded (LuD2).—This soil is shallow and well drained. The surface layer is light olive brown to very dark brown and is 10 to 20 inches thick. It is underlain by partly weathered rock. The depth to bedrock is generally 2 or 3 feet. Included in mapping were small areas of Stony rough land and small areas of Pacolet and Wedowee soils.

Runoff is rapid, infiltration is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops. Part of the acreage has been cleared and cultivated, but most of it is in pasture and in woodland. The root zone is thin. Erosion is a severe hazard. (Capability unit VIs-31; woodland group 3; wildlife group 2)

Madison Series

The Madison series consists of moderately deep, well-drained, strongly acid or very strongly acid soils of the Piedmont Upland. The slope is dominantly between 2 and 10 percent, but in places it is as much as 25 percent. The surface layer of these soils is very friable fine sandy loam or clay loam. The subsoil is red, friable to firm clay that is 20 to 40 percent mica. The mica fragments increase in number and size with increasing depth. Some soils of this series have quartz gravel up to 3 inches in diameter on the surface and throughout the profile.

Madison soils are associated with Appling and Louisa soils. They occur throughout the county and are extensive in the eastern half.

Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded (MdB2).—This is a well-drained soil. The main layers of a typical profile are—

0 to 6 inches, dark-brown, very friable gravelly fine sandy loam.
6 to 38 inches, red, friable clay; many small mica flakes give soil a slick, greasy feel.
38 to 60 inches, red, friable clay loam; large mica flakes.

In severely eroded spots the present surface layer is yellowish-red gravelly clay loam. Included in mapping were areas of Louisa soils, which make up less than 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth except in severely eroded spots. It responds to fertilization and management and is well suited to all crops grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage is in row crops. (Capability unit IIe-31; woodland group 1; wildlife group 1)

Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded (MdC2).—This soil is well drained. The surface layer is grayish brown to yellowish brown, is very friable, and is 4 to 6 inches thick. The subsoil is red, friable clay to a depth of about 38 inches. Included in mapping were small severely eroded areas where the surface layer is yellowish-red gravelly clay loam. Also included were areas of Louisa soils, which make up about 10 percent of the total acreage.

The available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

This soil has good tilth and can be worked throughout a wide range of moisture content. It responds to fertilization and management and is well suited to most of the cultivated crops and pasture plants grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage has been cleared and is in row crops or in pasture. Some areas formerly cultivated have been planted to loblolly pine (fig. 5). Erosion is a major hazard in cultivated areas. (Capability unit IIIe-31; woodland group 1; wildlife group 1)

Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded (MdD2).—This is a well-drained soil. The surface layer is grayish brown to yellowish brown, is very friable, and is 4 to 6 inches thick. The subsoil is red, friable to firm clay to a depth of about 37 inches. Included in mapping were some severely eroded areas where the surface layer is yellowish-red gravelly clay loam. Also included were areas of Louisa soils, which make up less than 15 percent of the total acreage.

Runoff is rapid, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate.

Figure 5.—**A 4-year-old stand of loblolly pine on Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded.**

This soil has good tilth and can be worked throughout a wide range of moisture content. It responds to fertilization and management. It is suited to a fairly wide range of plants and is well suited to most pasture plants grown in the county. Roots and water easily penetrate the subsoil. Most of the acreage is in pasture. A small acreage is in row crops. Some areas have been planted to loblolly pine. Erosion is a major hazard. (Capability unit IVe–31; woodland group 1; wildlife group 1)

Madison gravelly fine sandy loam, 15 to 25 percent slopes, eroded (MdE2).—This is a well-drained soil. The surface layer is brown to reddish brown, is very friable, and is 3 to 5 inches thick. The subsoil is red, friable to firm clay to a depth of about 32 inches. Included in mapping were some severely eroded areas where the surface layer is yellowish-red gravelly clay loam. Also included were areas of Louisa soils, which make up about 15 percent of the total acreage.

Runoff is very rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

Roots and water penetrate the subsoil of this soil fairly easily. A large acreage was once cleared and cultivated. Now most of the acreage is in pine forest. Erosion is a severe hazard. (Capability unit VIe–31; woodland group 1; wildlife group 1)

Madison gravelly clay loam, 2 to 6 percent slopes, severely eroded (MaB3).—This soil is well drained. The surface layer is brown to yellowish red, is friable, and is 2 to 5 inches thick. The subsoil is red clay to a depth of about 37 inches. Rills and shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Louisa soils, which make up less than 10 percent of the total acreage.

Permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is moderate.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. Its response to fertilization and management is fair, and it is suited to a fairly wide range of crops. Roots and water easily penetrate the subsoil. All of the acreage was once cleared and cultivated. Now a large part of it is in pasture or in pine forest. Erosion is a major hazard in cultivated areas. (Capability unit IIIe–331; woodland group 2; wildlife group 1)

Madison gravelly clay loam, 6 to 10 percent slopes, severely eroded (MaC3).—This soil is well drained. The surface layer is yellowish red, is friable, and is 2 to 5 inches thick. The subsoil is red, friable to firm clay 10 to 30 inches thick. Shallow gullies are common, and a few deep ones have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Louisa soils, which make up less than 10 percent of the total acreage.

This soil has poor tilth and can be worked within only a narrow range of moisture content without baking and clodding. Its response to fertilization and management is fair. If limed and fertilized, it is well suited to most pasture plants. Most of the acreage is in pasture or in woodland. Only a small acreage is cultivated. The available water capacity is low. Erosion is a major hazard in cultivated areas. (Capability unit IVe–331; woodland group 2; wildlife group 1)

Madison gravelly clay loam, 10 to 15 percent slopes, severely eroded (MaD3).—This soil is well drained. The surface layer is reddish brown to yellowish red, is friable, and is 2 to 5 inches thick. The subsoil is red clay to a depth of about 32 inches. Rills and shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Louisa soils, which make up less than 15 percent of the total acreage.

Runoff is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth. Its response to fertilization and management is fair, and it is suited to a fairly wide range of pasture plants. Roots and water easily penetrate the subsoil. All of the acreage was once cleared and cultivated. Now most of it is in pasture or in pine forest. (Capability unit VIe–331; woodland group 2; wildlife group 1)

Madison gravelly clay loam, 15 to 25 percent slopes, severely eroded (MaE3).—This is a well-drained soil. The surface layer is reddish brown to yellowish red, is friable, and is 2 to 5 inches thick. The subsoil is red, friable to firm clay to a depth of about 32 inches. Rills and shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Louisa soils, which make up less than 15 percent of the total acreage.

Runoff is very rapid, infiltration is slow, and permeability is moderate. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth. Roots and water easily penetrate the subsoil. All of the acreage was once cleared and cultivated, but now most of it is in pasture or in loblolly pine forest. (Capability unit VIIe–331; woodland group 2; wildlife group 1)

Mantachie Series

The Mantachie series consists of deep, moderately well drained or somewhat poorly drained soils. These soils are subject to overflow during prolonged heavy rains. The surface layer is dark-brown to dark yellowish-brown fine sandy loam to loam. The subsurface layer is dark-brown to yellowish-brown sandy loam to loam.

Mantachie soils are associated with the better drained Ochlockonee and Congaree soils, the finer textured Chewacla soils, the coarser textured, excessively drained Buncombe soils, and the poorly drained Wehadkee soils. In this county Mantachie soils occur on nearly level first bottoms along the Tallapoosa Rivers and the larger creeks. Most of the acreage has been cleared and is in pasture or in row crops. The rest is in woodland, chiefly loblolly pine and wetland hardwood.

The original vegetation consisted mainly of yellow-poplar, gum, red maple, birch, and willow, and included some pine.

Mantachie fine sandy loam (Mt).—This is a moderately well drained or somewhat poorly drained soil. The slope range is 0 to 2 percent. The main layers of a typical profile are—

0 to 12 inches, dark-brown, very friable fine sandy loam.
12 to 42 inches, mottled dark grayish-brown, pale-yellow, and light-gray, very friable sandy loam.

Mica flakes are common throughout the profile, and in places there are strata of sand and silt.

Runoff is slow, and permeability is moderate. The supply of organic matter is moderate, and natural fertility is moderate.

This soil has good tilth. It responds to fertilization and is one of the best soils in the county for corn, hay, and pasture grasses. Flooding of short duration is a major hazard. (Capability unit IIIw–32; woodland group 5; wildlife group 3)

Ochlockonee Series

The Ochlockonee series consists to deep, well-drained, strongly acid soils. These soils are subject of overflow during prolonged heavy rains. The surface layer is brown to dark yellowish-brown fine sandy loam. The subsurface layer is brown to yellowish-brown fine sandy loam to loamy sand.

Ochlockonee soils are associated with the finer textured Congaree soils, the moderately well drained or somewhat poorly drained Mantachie and Chewacla soils, and the coarser textured, excessively drained Buncombe soils. In this county Ochlockonee soils are on nearly level first bottoms along the Tallapoosa Rivers and larger creeks. Almost all of the acreage has been cleared. About 50 percent of the acreage is now in cultivated crops, about 25 percent is in pasture, and the rest is in loblolly pine and hardwood forest.

The original vegetation consisted of yellow-poplar, gum, red maple, and associated hardwoods.

Ochlockonee fine sandy loam (Oc).—This is a well-drained soil. The slope range is 0 to 2 percent. The main layers of a typical profile are—

0 to 8 inches, brown, very friable fine sandy loam.
8 to 40 inches +, yellowish-brown, very friable, massive sandy loam.

Each layer varies considerably in thickness and in places contains strata of sand, silt, and gravel. Included in mapping were small areas of Mantachie soils and small areas where the surface layer is silt loam.

Runoff is slow, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This is one of the most productive soils in the county. Most of the acreage is in corn or in pasture grasses. Some areas have been seeded to loblolly pine. Flooding of short duration is a major hazard. (Capability unit IIw–32; woodland group 5; wildlife group 3)

Ochlockonee fine sandy loam, local alluvium (Ok).—This soil is well drained. The slope range is 0 to 6 percent. The surface layer is dark grayish brown to reddish brown and is 5 to 10 inches thick. The subsurface layer is brown to yellowish-red fine sandy loam to loam. Included in mapping were small areas of Madison, Cecil, and Appling soils, all of which have a well-developed profile. Also included and making up less than 10 percent of the acreage were areas where the surface layer is reddish brown.

Runoff is slow, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate.

This soil occurs as small areas. It has good tilth, is highly productive, and is suited to a wide range of crops. Most of the acreage is in row crops or in vegetable gardens. (Capability unit IIe–31; woodland group 5; wildlife group 3)

Pacolet Series

The Pacolet series consists of strongly acid or very strongly acid, well-drained soils on uplands. The surface layer of these soils is very friable, brown to dark yellowish-brown sandy loam. The subsoil is friable, red sandy clay or clay.

Pacolet soils are closely associated with Cecil, Wedowee, and Louisburg soils. They are extensive in the southeastern part of this county, near Rock Mills. Most of the acreage has been cleared and cultivated, but much of it has reverted to pine forest, mainly loblolly. The rest is in pasture or in cultivated crops.

The original vegetation consisted of blackjack oak and other oak, hickory, chestnut, dogwood, and pine.

Pacolet sandy loam, 6 to 10 percent slopes, eroded (PsC2).—This is a well-drained soil. The main layers of a typical profile are—

0 to 4 inches, yellowish-brown, very friable sandy loam.
4 to 24 inches, red, friable sandy clay loam and sandy clay.
24 to 36 inches +, red, massive, highly weathered granite that contains large mica flakes.

The depth to bedrock is 24 to 40 inches. Included in mapping were severely eroded areas where the surface layer is yellowish-red clay loam. Also included were areas of Wedowee and Louisburg soils, which make up about 10 percent of the acreage.

Permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth except in severely eroded areas and can be worked throughout a wide range of moisture

content. The root zone is thin but is easily penetrated by roots and water. Most of the acreage has been cleared and is in pasture or in row crops. The thin subsoil is a major limitation, and erosion is a major hazard. (Capability unit IVe–39; woodland group 1; wildlife group 1)

Pacolet sandy loam, 10 to 15 percent slopes, eroded (PsD2).—This soil is well drained. The surface layer is brown to dark yellowish brown, is friable, and is 4 to 6 inches thick. The subsoil is red, firm clay about 8 to 12 inches thick. Included in mapping were small, severely eroded areas where the surface layer is yellowish-red sandy clay loam or clay loam. Also included were areas of Wedowee and Louisburg soils, which make up about 10 percent of the acreage. The depth to bedrock ranges from 24 to 40 inches.

Runoff is rapid, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth. It responds to fertilization and is suited to a fairly wide range of crops. The root zone is thin but is easily penetrated by roots and water. Most of the acreage was once cleared and in pasture, but a large part of the acreage is now in pine forest. Erosion is a major hazard. (Capability unit VIe–32; woodland group 1; wildlife group 1)

Pacolet sandy loam, 15 to 25 percent slopes, eroded (PsE2).—This is a well-drained soil. The surface layer is brown to dark yellowish brown, is friable, and is 4 to 6 inches thick. The subsoil is red clay. The depth to bedrock is 24 to 40 inches. Included in mapping were small, severely eroded areas where the surface layer is yellowish-red sandy clay loam or clay loam. Also included were areas of Wedowee and Louisburg soils, which make up about 10 percent of the acreage.

Runoff is very rapid, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

The root zone of this soil is thin but is easily penetrated by roots and water. Most of the acreage was once cleared and in pasture. Now most of it is in pine forest. Erosion is a severe hazard. (Capability unit VIe-32; woodland group 1; wildlife group 1)

Pacolet clay loam, 6 to 15 percent slopes, severely eroded (PcC3).—This is a well-drained soil. The surface layer is brown to yellowish red and is 3 to 5 inches thick. The subsoil is red clay. The depth to bedrock is 24 to 40 inches. Rills and shallow gullies are common, and a few deep gullies have formed. Included in mapping were small areas of soils that are less severely eroded than this soil and have a thicker, darker colored surface layer. Also included were areas of Wedowee and Louisburg soils, which make up less than 10 percent of the acreage.

Permeability is slow, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. The root zone is thin but is fairly easily penetrated by roots and water. All of the acreage was once cleared and cultivated, but now a large part of it is in pine forest or in pasture. Erosion is a major hazard. (Capability unit VIIe–331; woodland group 2; wildlife group 1)

Roanoke Series

The Roanoke series consists of poorly drained soils on low stream terraces of the Piedmont Plateau. The surface layer is dark-brown to dark grayish-brown silt loam. The subsoil is mottled gray sandy clay loam.

Roanoke soils are associated with the somewhat poorly drained Augusta soils, the moderately well drained Altavista soils, and the better drained, weakly developed Chewacla and Congaree soils, which are on first bottoms. The Roanoke soils in this county occur on nearly level areas and in slight depressions along the larger streams. They are subject to occasional overflow and are ponded after heavy rains. Most of the acreage has been cleared and is now in pasture. The rest supports a secondary growth of swampland timber.

The natural vegetation consisted of bay, red maple, willow, gum, wetland oak, alder, and a few pine trees.

Roanoke silt loam (Ra).—This is a poorly drained soil on low stream terraces. The slope range is 0 to 2 percent. The main layers in a typical profile are—

0 to 5 inches, dark grayish-brown, very friable silt loam.
5 to 45 inches +, gray, friable, blocky to massive sandy clay loam to sandy clay highly mottled with light olive brown.

The depth to unconsolidated material ranges from 40 to 60 inches.

Runoff is slow, and permeability is slow. The water table is high. The root zone is thin.

Because of poor drainage, this soil is limited mainly to pasture and woodland. Most of the acreage is in pasture. (Capability unit IVw–31; woodland group 6; wildlife group 4)

Rock Land

Rock land (Ro) is 75 percent or more outcrops of granite and gneiss. In some areas the rock is covered with a shallow, coarse sandy soil that supports a sparse stand of scrub oak or pine. In other areas the vegetation consists of lichens and moss.

Rock land is associated with the deeper, better developed Appling and Louisburg soils. It is inextensive and is used for recreation. Small areas occur near Rock Mills, Wadley, and Blakes Ferry, and northeast of Wedowee. (Capability unit VIIIs–39; wildlife group 2)

Stony Rough Land

Stony rough land (Sr) occurs on steep mountain slopes, or bluffs, and is 50 to 75 percent covered with stones 10 inches to 3 feet in diameter. Stones are imbedded throughout the profile, and rock outcrops are common. The slope generally is between 15 and 40 percent, but in places it is as much as 60 percent.

Stony rough land is associated with Louisa, Louisburg, and Wilkes soils. It is well drained to excessively drained. Nearly all of the acreage supports fair to good stands of mixed hardwoods and pine. (Capability unit VIIs–31; wildlife group 2)

Terrace Escarpment

Terrace escarpment (Te) is on short, steep slopes between the stream terraces and flood plains and also be-

tween the terraces. It occurs mostly in the eastern part of the county along the Little Tallapoosa River and the larger creeks. The slope range is 10 to 40 percent. The soil material is medium textured to coarse textured, highly stratified, and yellowish brown to red. The surface layer ranges from dark grayish brown to reddish brown in color, and from gravelly sandy loam to loam in texture. Mica, schist, and gneiss are exposed on the lower parts of slopes. The soil material is underlain by coarse sand and gravel at a depth of about 40 inches. In spots Louisa and Wickham soils can be identified, but they are so intricately mixed with unidentifiable soil material that it is difficult to determine their extent.

Runoff is medium to rapid. Permeability and the available water capacity both vary.

Terrace escarpment is not suited to cultivated crops. Most of the acreage is in pine and mixed hardwood forest. Erosion is a major hazard. Management for woodland or pasture can be determined only by site investigation. (Capability unit VIIs–31; wildlife group 2)

Wedowee Series

The Wedowee series consists of well-drained, strongly acid or very strongly acid soils on uplands. In areas where these soils are not severely eroded, the surface layer is very friable, grayish-brown to yellowish-brown sandy loam and the subsoil is yellowish-brown to yellowish-red sandy clay.

Wedowee soils are associated with Appling, Cecil, Pacolet, and Louisburg soils. They are extensive in the southeastern part of the county, near Rock Mills. Much of the acreage was once cleared and used for row crops or pasture. Now many fields have been abandoned and have reverted to loblolly pine.

The original vegetation consisted of mixed oaks, hickory, poplar, chestnut, sourwood, and pine.

Wedowee gravelly sandy loam, 6 to 10 percent slopes, eroded (WgC2).—This is a well-drained upland soil. The main layers of a typical profile are—

0 to 5 inches, grayish-brown, very friable gravelly sandy loam; about 15 to 25 percent angular quartz gravel.
5 to 25 inches, strong-brown, friable sandy clay loam and sandy clay.
25 to 38 inches, mottled yellowish-red saprolite or weathered granite rock that easily crushes to massive sandy clay loam.
38 inches +, multicolored granite rock.

Included in mapping were small areas of Pacolet, Louisburg, and Appling soils and some severely eroded areas where the surface layer is yellowish-brown sandy clay loam.

The available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth except in severely eroded areas. It responds to fertilization and management and is suited to a fairly wide range of crops. Most of the acreage has been cleared and cultivated. About 20 percent of it is in row crops, and the rest is in pasture or in woodland. Erosion is the main hazard in cultivated areas. (Capability unit IVe–39; woodland group 1; wildlife group 1)

Wedowee gravelly sandy loam, 10 to 15 percent slopes, eroded (WgD2).—This is a well-drained upland soil. The surface layer is grayish brown to light yellowish brown and is 3 to 5 inches thick. This layer is about 15 to 25 percent angular quartz gravel. The subsoil is yellowish-brown to yellowish-red sandy clay loam to sandy clay 20 to 34 inches thick. Included in mapping were small areas of Louisburg, Pacolet, and Appling soils and some severely eroded areas where the surface layer is yellowish-brown sandy clay loam.

The available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has good tilth except in severely eroded areas. It responds to fertilization and management. Most of the acreage has been cleared and cultivated. About 70 percent of the acreage is now in forest, and the rest is in pasture or in crops. (Capability unit VIe–32; woodland group 1; wildlife group 1)

Wedowee gravelly sandy loam, 15 to 25 percent slopes, eroded (WgE2).—This is a well-drained upland soil. The surface layer is grayish brown to yellowish brown and is 3 to 5 inches thick. This layer is about 15 to 25 percent angular quartz gravel. The subsoil is yellowish-brown to yellowish-red sandy clay loam to sandy clay 24 to 30 inches thick. Included in mapping were some severely eroded areas where the surface layer is yellowish-brown sandy clay loam and small areas of Louisburg and Pacolet soils.

Runoff is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has fair tilth. The root zone is thin. Most of the acreage is in forest. Erosion is difficult to control. (Capability unit VIe–32; woodland group 1; wildlife group 1)

Wedowee gravelly sandy clay loam, 6 to 10 percent slopes, severely eroded (WdC3).—This is a well-drained upland soil. The present surface layer, which is predominantly subsoil material, is yellowish brown and is 3 to 5 inches thick. It is 10 to 20 percent angular quartz gravel. The subsoil is yellowish-brown to yellowish-red sandy clay 20 to 30 inches thick. Shallow gullies are common, and a few deep ones have formed. Included in mapping were small areas of Pacolet soils.

Infiltration is slow, and the available water capacity is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and baking. All of the acreage was once cleared and cultivated. Now most of it is in forest, and the rest is in pasture or in crops. (Capability unit VIe–331; woodland group 2; wildlife group 1)

Wedowee gravelly sandy clay loam, 10 to 15 percent slopes, severely eroded (WdD3).—This is a well-drained upland soil. The present surface layer, which is predominantly subsoil material, is yellowish brown and is 2 to 4 inches thick. It is 10 to 20 percent angular quartz gravel. The subsoil is yellowish-brown to yellowish-red sandy clay to a depth of about 30 inches. Shallow gullies are common, and a few deep ones have formed. Included in mapping were small areas of Pacolet and Louisburg soils.

Runoff is rapid, infiltration is slow, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth and can be worked within only a narrow range of moisture content without clodding and baking. Much of the acreage was once cleared and cultivated. Now about 70 percent of the acreage is in forest, and the rest is either in pasture or is idle. Erosion is

difficult to control because of the strong slopes. (Capability unit VIe–331; woodland group 2; wildlife group 1)

Wedowee gravelly sandy clay loam, 15 to 25 percent slopes, severely eroded (WdE3).—This is a well-drained upland soil. The present surface layer, which is predominantly subsoil material, is yellowish brown and is 2 to 4 inches thick. It is 10 to 20 percent angular quartz gravel. The subsoil is yellowish-brown to yellowish-red sandy clay to a depth of about 24 to 30 inches. Shallow gullies are common, and a few deep ones have formed. Included in mapping were small areas of Pacolet and Louisburg soils.

Runoff is rapid, infiltration is slow, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil has poor tilth. Much of the acreage was once cleared and cultivated. Now most of it is in pine forest. Erosion is difficult to control because of the strong slopes. (Capability unit VIIe–331; woodland group 2; wildlife group 1)

Wehadkee Series

The Wehadkee series consists of deep, poorly drained soils. The surface layer of these soils is mottled dark-brown silt loam to fine sandy loam. The subsurface layers are mottled olive fine sandy loam and sandy clay loam.

Wehadkee soils are associated with the excessively drained Buncombe soils, the well drained Congaree soils, and the moderately well drained or somewhat poorly drained Chewacla soils. They occur on nearly level first bottoms along the larger streams throughout the county. These soils are subject to occasional overflow and are ponded after heavy rains. About half of the acreage is cleared and is in pasture. The rest is in woodland, chiefly wetland hardwoods.

The original vegetation consisted of bay, red maple, willow, gum, wetland oak, alder, and a few pine trees.

Wehadkee fine sandy loam (Wh).—This poorly drained soil is on first bottoms that are likely to be flooded. The main layers of a typical profile are—

0 to 2 inches, dark grayish-brown, very friable fine sandy loam.
2 to 15 inches, olive to olive-gray, very friable fine sandy loam.
15 to 40 inches +, light olive-gray to white, friable sandy clay loam; many pale-yellow and brownish-yellow mottles.

This soil is 30 to 60 inches deep. The texture of the surface layer ranges from fine sandy loam to silt loam. Small mica flakes are abundant throughout the profile, and in places there are strata of sand and silt.

Runoff is slow, and permeability is slow.

This soil is suited to pasture and woodland but to only a few row crops. Most of the acreage is in wetland timber. (Capability unit IVw–31; woodland group 6; wildlife group 4)

Wehadkee and Mantachie soils (Wk).—This undifferentiated unit consists of nearly level, poorly drained and somewhat poorly drained soils. These soils vary in the texture of their surface layer and contain 2- to 12-inch strata that range from gravel through sand to clay in texture. This unit is about 40 to 60 percent Wehadkee soils and 20 to 40 percent Mantachie soils. Mantachie soils are described under the heading "Mantachie Series." This unit also includes areas of unclassified, highly stratified loams, sands, and gravel.

These soils are on narrow to moderately wide flood plains along the upper part of streams. They are subject to frequent flooding, especially after heavy rains. Wehadkee soils are on the low-lying wet areas, and Mantachie soils are at slightly higher elevations. Most of the acreage is in wetland timber. The rest is in pasture. (Capability unit IVw–31; woodland group 6; wildlife group 4)

Wickham Series

The Wickham series consists of deep, well-drained soils on high stream terraces of the Piedmont Plateau. The slope range is 2 to 15 percent. The surface layer is fine sandy loam or loam. The subsoil is sandy clay loam to sandy clay.

Wickham soils are associated with the moderately well drained Altavista soils, the somewhat poorly drained Augusta soils, and the poorly drained Roanoke soils. In this county they occur as small areas along the larger creeks.

The largest area is in the northeastern corner of the county along the Little Tallapoosa River. Almost all of the acreage has been cleared and is in row crops, such as corn and cotton, or in pasture. A small acreage is in pine trees.

The original vegetation consisted of mixed oaks, hickory, chestnut, and pine, and included some dogwood and blackjack oak in the understory.

Wickham fine sandy loam, 2 to 6 percent slopes, eroded (WmB2).—This is a deep, well-drained, very strongly acid soil on high stream terraces. The main layers of a typical profile are—

0 to 10 inches, dark grayish-brown, very friable fine sandy loam.
10 to 26 inches, yellowish-red, friable sandy clay loam.
26 to 130 inches, dark-red, friable sandy clay.

Included in mapping were a few areas of Altavista soils, which are more poorly drained than this soil and have a lighter colored subsoil, and areas of soils that have a red subsoil. Also included were areas where gravel as much as 2 inches in diameter occurs throughout the profile.

Permeability is moderate, and the available water capacity is moderately high. Natural fertility is low.

This soil has good tilth. It responds to fertilization and is suited to a wide range of crops. Most of the acreage has been cleared and cultivated. About half of the acreage is now in row crops, and the rest is in pasture or in woodland. (Capability unit IIe–31; woodland group 1; wildlife group 1)

Wickham fine sandy loam, 6 to 10 percent slopes, eroded (WmC2).—This is a deep, well-drained, very strongly acid soil on high stream terraces. The surface layer is grayish brown to brown, is very friable, and is 4 to 7 inches thick. The subsoil is strong-brown to yellowish-red sandy clay loam to sandy clay. Included in mapping were small areas of the more poorly drained Altavista soils, areas where the subsoil is red, and some severely eroded areas where the surface layer is yellowish-brown sandy clay loam.

Permeability is moderate, and the available water capacity is moderately high. Natural fertility is low.

This soil has good tilth. It responds to fertilization and is suited to a fairly wide range of crops. Most of the acreage has been cleared and cultivated. About half of the acreage is now in row crops, and the rest is either in

pasture or in woodland. This soil is well suited to loblolly pine. (Capability unit IIIe–31; woodland group 1; wildlife group 1)

Wickham fine sandy loam, 10 to 15 percent slopes, eroded (WmD2).—The surface layer of this soil is brown to dark grayish brown, is very friable, and is 4 to 6 inches thick. The subsoil is sandy clay to sandy clay loam mottled with yellowish red, strong brown, and yellowish brown. Included in mapping were small areas of Altavista soils, a few severely eroded spots, and areas where the subsoil is red.

Runoff is rapid, infiltration is medium, and the available water capacity is moderately high. Permeability is rapid in the surface layer and moderate in the subsoil. Natural fertility is low.

This soil has fair tilth. It responds to fertilization and is suited to a fairly wide range of crops. Most of the acreage has been cleared and is either in row crops or in pasture. Erosion is a severe hazard. (Capability unit IVe–31; woodland group 1; wildlife group 1)

Wickham gravelly fine sandy loam, 6 to 10 percent slopes, eroded (WnC2).—This is a deep, well-drained, very strongly acid soil on high stream terraces. The surface layer is brown to dark brown, is very friable, and is 4 to 7 inches thick. The subsoil is strong-brown to yellowish-red sandy clay loam. Included in mapping were small areas of the more poorly drained Altavista soils, some eroded spots, and spots where all of the original surface layer has been removed by erosion and the subsoil is exposed.

This soil has good tilth and is suited to a fairly wide range of crops. Natural fertility is moderate. Most of the acreage has been cleared and cultivated. About half of the acreage is in row crops (fig. 6), and the rest is either in pasture or in woodland. (Capability unit IIIe–31; woodland group 1; wildlife group 1)

Wickham gravelly fine sandy loam, 10 to 15 percent slopes, eroded (WnD2).—This is a deep, well-drained, very strongly acid soil on high stream terraces. The surface layer is olive brown, is very friable, and is 3 to 5 inches thick. The subsoil is strong-brown to yellowish-red sandy clay loam. Included in mapping were small areas of soils that have a redder, heavier textured subsoil than this soil, eroded areas where the subsoil is exposed, and small areas that have steeper slopes.

Figure 6.—**Corn on Wickham gravelly fine sandy loam.**

This soil has good tilth and is suited to a fairly wide range of crops. Natural fertility is moderate. Most of the acreage has been cleared and cultivated. (Capability unit IVe–31; woodland group 1; wildlife group 1)

Wilkes Series

The Wilkes series consists of shallow, well-drained soils on uplands. The surface layer of these soils is dark-brown to olive-brown stony sandy loam. The subsurface layers are brown to dark yellowish-brown clay or loam.

Wilkes soils are associated with Davidson soils, which are deeper and have more strongly expressed horizons. In this county Wilkes soils occur near Rock Mills and Wehadkee and along Cornhouse Creek.

The original vegetation consisted mainly of blackjack oak, scarlet oak, chestnut oak, and pine, and included some hickory.

Wilkes sandy loam, 6 to 10 percent slopes, eroded (WsC2).—This is a shallow, well-drained soil. The main layers of a typical profile are—

0 to 7 inches, brown, very friable sandy loam.
7 to 12 inches, brown, friable loam.
12 inches +, chloritic schist.

This soil varies considerably within short distances. In some places the surface layer is underlain by dark yellowish-brown to reddish-brown clay. In others this clay layer is thin, and in yet others, more than 6 inches thick.

Runoff is medium, infiltration is medium, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops. Much of the acreage was once cleared, but now most of it is in pasture or in pine forest. The root zone is thin. Erosion is a hazard in cultivated areas. (Capability unit VIs–31; woodland group 3; wildlife group 2)

Wilkes stony sandy loam, 10 to 15 percent slopes, eroded (WtD2).—This soil is shallow and well drained. It varies considerably within short distances. The surface layer is olive-brown to dark-brown, is friable, and is 4 to 7 inches thick. In some places it is underlain by a thin layer of yellowish-brown to yellowish-red clay. In others this clay layer is more than 6 inches thick. Included in mapping were small areas of Stony rough land.

Runoff is rapid, infiltration is medium, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low.

This soil is suited to only a narrow range of crops. Much of the acreage was once cleared, but a large part is now in pasture or in pine forest. The root zone is thin. Erosion is a severe hazard. (Capability unit VIIs–31; woodland group 3; wildlife group 2)

Use of the Soils For Crops and Pasture

This section explains how the soils of Randolph County can be managed for dryland crops and for pasture. It describes management practices for groups of soils that have similar potentialities and requirements, and it gives estimates of the average yields of crops commonly grown.

Capability Groups of Soils

Capability classification is the grouping of soils to show, in a general way, their suitability for most kinds of farming. It is a practical classification based on limitations of the soils, the risk of damage when they are used, and the way they respond to treatment. The soils are classified according to degree and kind of permanent limitation, but without consideration of major and generally expensive landforming that would change the slope, depth, or other characteristics of the soils; and without consideration of possible but unlikely major reclamation projects.

In the capability system, all kinds of soils are grouped at three levels: the capability class, the subclass, and the unit. These are discussed in the following paragraphs.

CAPABILITY CLASSES, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I. Soils have few limitations that restrict their use.

Class II. Soils have moderate limitations that reduce the choice of plants or require moderate conservation practices.

Class III. Soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV. Soils have very severe limitations that restrict the choice of plants, require very careful management, or both.

Class V. Soils are subject to little or no erosion but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife food and cover.

Class VI. Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife food and cover.

Class VII. Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to grazing, woodland, or wildlife.

Class VIII. Soils and landforms have limitations that preclude their use for commercial plant production and restrict their use to recreation, wildlife, or water supply, or to esthetic purposes.

CAPABILITY SUBCLASSES are soil groups within one class; they are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, IIe. The letter *e* shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is too cold or too dry.

In class I there are no subclasses, because the soils of this class have few limitations. Class V can contain, at the most, only subclasses indicated by *w*, *s*, and *c*, because the soils in it are subject to little or no erosion, though they have other limitations that restrict their use largely to pasture, range, woodland, wildlife, or recreation.

CAPABILITY UNITS are soil groups within the subclasses. The soils in one capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity and other responses to management. Thus, the capability unit is a convenient grouping for making many statements about management of soils. Capability units are generally designated by adding Arabic numerals to the subclass symbol, for example, IIe–31 or IIIe–32. Thus, in one symbol, the Roman numeral designates the capability class, or degree of limitation; the small letter indicates the subclass, or kind of limitation, as defined in the foregoing paragraph; and the Arabic numeral specifically identifies the capability unit within each subclass. These numerals are not consecutive in Randolph County, because not all of the capability units used in Alabama occur in this county.

Management by Capability Units [1]

The soils of Randolph County have been grouped in 25 capability units. In the following pages each of the units is described, and suggestions for use and management are given.

Specific statements about the amount of lime and the kinds and amounts of fertilizer to be used cannot be given in the suggestions for management, because the present needs of a soil depend on its previous use and management. Therefore, lime and fertilizer should be applied according to the results of soil tests, which can be made by technicians at the Soil Testing Laboratory at Auburn University.

Further information about specific management can be obtained from the local representative of the Soil Conservation Service or from the county agent.

Unit IIe–31

This unit consists of deep, well-drained, gently sloping soils on uplands and stream terraces. These soils are slightly to moderately eroded. The surface layer is very friable, grayish-brown to dark reddish-brown gravelly sandy loam to fine sandy loam 4 to 10 inches thick. The subsoil is friable to firm, red sandy clay to clay. The root zone is deep. The depth to bedrock ranges from 6 to 20 feet or more.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is low to moderate.

These soils respond well to fertilization and management. They are easy to keep in good tilth if organic matter is added, and they can be worked throughout a wide range of moisture content without clodding or puddling. If terraced, farmed on the contour, protected by grassed waterways, and improved by the use of crop residue, these soils can be used for cultivated crops year after year. They are well suited to cotton, corn, soybeans, small grain, and many grasses and legumes (fig. 7). In terraced fields they are used as grassed waterways. Nearly 35 percent of the acreage is cultivated. The erosion hazard is moderate in cultivated areas.

[1] O. D. FINCHER, conservation agronomist, Soil Conservation Service, assisted with the preparation of this section.

Figure 7.—Spring cutting of fescue and clover on Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded, which is in capability unit IIe–31. This field was grazed all winter.

Unit IIe–32

This unit consists of well drained and moderately well drained, gently sloping soils on uplands and stream terraces. These soils are slightly to moderately eroded. The surface layer is very friable, grayish-brown gravelly sandy loam to fine sandy loam 4 to 10 inches thick. The subsoil is yellowish-brown to yellowish-red sandy clay loam. The root zone is deep. The depth to bedrock ranges from 5 to 15 feet or more.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate to low.

These soils respond well to fertilization and management and are the best in the county for row crops. They are easy to keep in good tilth if organic matter is added, and they can be worked throughout a wide range of moisture content without clodding or crusting. If terraced, protected by grassed waterways, farmed on the contour, and improved by the use of crop residue, these soils can be used for row crops year after year. They are well suited to cotton, corn, soybeans, and many grasses and legumes (fig. 8). Almost 40 percent of the acreage is cultivated. The erosion hazard is moderate in cultivated areas.

Unit IIw–31

This unit consists of a moderately well drained, nearly level soil on low stream terraces. The surface layer is very friable, grayish-brown gravelly fine sandy loam or fine sandy loam 4 to 10 inches thick. The subsoil is friable, yellowish-brown sandy clay loam. The root zone is deep. The depth to bedrock ranges from 5 to 15 feet or more.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is moderate to low.

This soil can be worked throughout a fairly wide range of moisture content without clodding or crusting. It can be used for row crops year after year if residue from the previous crop is retained and a cover crop is planted in fall. Because of slow drainage in the lower part of the subsoil, this soil is somewhat limited in its suitability for most deep-rooted crops. If well managed, however, it is well suited to corn, small grain, soybeans, and many grasses and legumes. About 45 percent of the acreage is cultivated. The erosion hazard is moderate in areas that are row cropped. Water is likely to stand for a short period after heavy rain, and a flood occurs about once in 20 years.

Figure 8.—Field border of fescue on Altavista gravelly fine sandy loam, 2 to 6 percent slopes, helps to control erosion and furnishes turning area for farm equipment. If fertilized and well managed, this soil produces good yields of corn. It is in capability unit IIe–32.

Unit IIw–32

This unit consists of deep, well-drained soils on flood plains. The surface layer is friable, brown silt loam or fine sandy loam 6 to 12 inches thick. The subsurface layer is friable, brown sandy loam and in places contains layers of sand and silt. The root zone is deep. The depth to bedrock ranges from 5 to 10 feet or more.

Runoff is slow, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate. Fertility is increased from time to time when sediments are deposited by flood water.

These soils are easy to keep in good tilth and are fairly easy to work. They are well suited to small grain, corn, soybeans, fescue (fig. 9), bahiagrass, bermudagrass, and

Figure 9.—Cattle grazing fescue and Ladino clover on Ochlockonee fine sandy loam. This soil is in capability unit IIw–32.

many legumes. They can be used for row crops year after year if all crop residue is retained and cover crops are planted. About 35 percent of the acreage is cultivated. The erosion hazard is not serious in cultivated areas. A flood occurs occasionally, usually in winter or early in spring, but seldom lasts longer than 2 or 3 days.

Unit IIIe–31

This unit consists of well-drained, sloping, red soils on uplands and stream terraces. These soils are slightly to moderately eroded. The surface layer is very friable, grayish-brown to reddish-brown sandy loam and gravelly sandy loam or fine sandy loam and gravelly fine sandy loam. It is 4 to 8 inches thick. The subsoil is friable to firm, red sandy clay to clay. The root zone is deep. The depth to bedrock ranges from 6 to 20 feet.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are easy to keep in good tilth if a large amount of residue is retained, and all but the more eroded soils can be worked throughout a fairly wide range of moisture content without clodding or crusting. If cultivated, these soils need to be protected by terraces, grassed waterways, contour farming, and cover crops. An example of a suitable cropping system is 3 years of perennial grasses and legumes followed by 2 years of row crops. These soils are well suited to small grain, cotton, corn, soybeans, many grasses (fig. 10) and legumes, and to apple, peach, and pecan trees. About 35 percent of the acreage is cultivated. The erosion hazard is serious in cultivated areas.

Unit IIIe-32

This unit consists of well drained to moderately well drained, sloping soils on uplands and stream terraces. These soils are slightly to moderately eroded. The surface layer is very friable, grayish-brown gravelly sandy loam to fine sandy loam 4 to 10 inches thick. The subsoil is friable, yellowish-brown to yellowish-red sandy clay loam to sandy clay. The root zone is deep. The depth to bedrock ranges from 5 to 15 feet or more.

Figure 10.—**Cattle grazing fescue and Ladino clover on Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded, which is in capability unit IIIe–31. Stand of loblolly pine in background is on Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded, a soil in unit IVe–31.**

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The organic-matter content is low, and natural fertility is moderate to low. The reaction is strongly acid.

These soils can be kept in good tilth if crop residue is retained, and they can be worked throughout a fairly wide range of moisture content without clodding or crusting. If cultivated, they need the protection of terraces, grassed waterways, contour farming, and cover crops. An example of a suitable cropping system is 3 years of perennial grasses and legumes followed by 2 years of row crops. These soils are well suited to small grain, corn, cotton, soybeans, many grasses and legumes, and to peach, apple, and pecan trees. About 35 percent of the acreage is cultivated. The erosion hazard is serious in cultivated areas.

Unit IIIe–331

This unit consists of well-drained, gently sloping, red soils on uplands. These soils are severely eroded. The surface layer is brown to reddish-brown gravelly clay loam 2 to 5 inches thick. The subsoil is friable to firm, red clay. Water and roots readily penetrate to a depth of 30 inches or more. The depth to bedrock ranges from 4 to 20 feet. Rills and shallow gullies are common, and there are a few deep gullies.

Infiltration is slow, and permeability is moderate. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are in poor tilth. They can be worked within only a narrow range of moisture content without clodding and crusting. If cultivated, they need to be protected by terraces, grassed waterways, contour farming, and crop residue. An example of a suitable cropping system is 4 years of perennial grasses followed by 2 years of row crops. These soils are suited to corn, cotton, grain sorghum, tall fescue, bahiagrass, bermudagrass, and sericea lespedeza, and to apple, peach, and pecan trees. About 25 percent of the acreage is cultivated. The erosion hazard is serious in cultivated areas.

Unit IIIw–31

This unit consists of somewhat poorly drained, nearly level and gently sloping soils on low stream terraces. These soils have a high water table and tend to puddle after heavy rain. The surface layer is grayish-brown to olive-gray fine sandy loam. The subsoil is mottled light olive-brown to gray sandy clay. The depth to unconsolidated material ranges from 30 to more than 60 inches.

Runoff is slow to medium, permeability is slow, and the available water capacity is moderately high. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are suited to corn, fescue, clover, bahiagrass, and bermudagrass. Returning crop residue improves tilth and is advisable if row crops are grown year after year. About 5 percent of the acreage is cultivated. The nearly level soils in this unit need to be drained, but they are not susceptible to erosion.

Unit IIIw–32

This unit consists of deep, moderately well drained to somewhat poorly drained, nearly level soils on first bot-

toms. The surface layer is brown to dark-brown fine sandy loam to silt loam 5 to 10 inches thick. The subsurface layer is brown to yellowish-brown, mottled sandy loam to silty clay loam. The depth to mottling ranges from 10 to 24 inches.

Infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is moderate, and natural fertility is moderate. Fertility is increased from time to time when sediments are deposited by floodwater.

These soils are in good tilth and respond well to fertilizer. They are suited to corn, fescue, white clover, bahiagrass, and bermudagrass. They can be used for row crops year after year if crop residue is retained. Drainage is needed. About 35 percent of the acreage is cultivated. The erosion hazard is not serious in cultivated areas. A flood occurs occasionally, usually in winter or early in spring, but seldom lasts longer than 2 or 3 days.

Unit IIIs–31

The one soil in this unit, Buncombe loamy sand, is a deep, excessively drained, yellowish-brown, gently sloping soil on first bottoms. The surface layer is loose, dark-brown loamy fine sand 6 to 12 inches thick. The lower subsoil is very friable, yellowish-brown loamy sand. Roots penetrate to a depth of 48 inches or more. The depth to bedrock ranges from 5 to 15 feet or more.

Runoff is no problem, but plant nutrients are leached out readily. Infiltration is rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

This soil is in good tilth and can be worked throughout a wide range of moisture content without clodding or crusting. It is limited in its use for row crops but is moderately well suited to small grain and to perennial grasses and legumes. Row crops could be grown year after year if they were planted on the contour and if the soil were improved by the use of crop residue and protected by winter cover crops. About 10 percent of the acreage is either in cultivated crops or in pasture. The erosion hazard is slight in cultivated areas.

Unit IVe–31

This unit consists of well-drained, strongly sloping soils on uplands and stream terraces. These soils are slightly to moderately eroded. The surface layer is very friable, grayish-brown to reddish-brown gravelly sandy loam to gravelly fine sandy loam 4 to 10 inches thick. The subsoil is friable to firm, yellowish-brown to red sandy clay to clay. The root zone is deep. The depth to bedrock ranges from 6 to 20 feet.

Runoff is rapid, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low. The reaction is strongly acid.

These soils are easy to keep in good tilth if a large amount of residue from the previous crop is retained, and they can be worked throughout a fairly wide range of moisture content without clodding or crusting. If cultivated, they need to be protected by terraces, grassed waterways, and contour farming. An example of a suitable cropping system is 5 years of perennial grasses followed by 2 years of row crops. These soils are suited to cotton, corn, grain sorghum, small grain, tall fescue, bahiagrass, bermudagrass, and sericea lespedeza, and to apple, peach, and pecan trees. About 15 percent of the acreage is cultivated. Erosion is a major hazard in cultivated areas.

Unit IVe–331

This unit consists of well-drained, sloping and strongly sloping soils on uplands. These soils are severely eroded. The surface layer is yellowish-brown to reddish-brown gravelly clay loam to gravelly sandy clay loam. Most of the original surface layer has been lost through erosion. The subsoil is yellowish-red to red sandy clay to clay. Roots penetrate to a depth of 30 inches or more. The depth to bedrock ranges from 4 to 20 feet. Shallow gullies are common.

Infiltration is slow, permeability is moderate, and the available water capacity is low. The supply of organic matter is low. The reaction is strongly acid.

These soils are in poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. If cultivated, they need to be protected by terraces, grassed waterways, contour farming, and crop residue. An example of a suitable cropping system is 5 years of perennial grasses followed by 2 years of row crops. These soils are suited to cotton, corn, grain sorghum, small grain, tall fescue, bahiagrass, bermudagrass, and sericea lespedeza, and to apple, peach, and pecan trees. About 10 percent of the acreage is cultivated. The erosion hazard is serious in cultivated areas.

Unit IVe–33

The one soil in this unit, Louisa gravelly sandy loam, 6 to 10 percent slopes, is a shallow, well-drained soil on uplands. The surface layer is friable, dark grayish-brown, yellowish-red, or reddish-brown gravelly sandy loam 3 to 6 inches thick. The subsoil is a thin, discontinuous layer of yellowish-red to red clay loam. The root zone is shallow.

Infiltration is medium, permeability is rapid, and the available water capacity is low. The supply of organic matter is low. The reaction is strongly acid.

This soil is droughty and is easily leached of plant nutrients. It is not well suited to row crops but is fairly well suited to tall fescue, bahiagrass, bermudagrass, and sericea lespedeza. Open areas are well suited to permanent pasture or to pine trees.

Unit IVe–39

This unit consists of well-drained, sloping soils that are moderately eroded. The surface layer is grayish-brown to dark grayish-brown gravelly sandy loam to sandy loam 3 to 6 inches thick. The subsoil is a thin layer of yellowish-red to red sandy clay to clay that is easily penetrated by roots and water. The root zone is shallow. The depth to bedrock ranges from 2 to 4 feet.

Infiltration is medium, permeability is moderate, and the available water capacity is low. The supply of organic matter is low. The reaction is strongly acid.

These soils are droughty. They are not well suited to row crops but are fairly well suited to sericea lespedeza, bahiagrass, and bermudagrass.

Unit IVw–31

This unit consists of poorly drained, nearly level soils on first bottoms and low stream terraces. The surface layer is dark-brown to dark grayish-brown fine sandy loam to silt loam. The subsoil is mottled brown to gray

and yellowish-brown fine sandy loam to sandy clay. The water table is high, and roots penetrate only to a depth of about 12 inches.

Runoff is slow, permeability is slow, and the available water capacity is high or moderately high.

These soils are flooded frequently, and many spots are under water much of the time. Unless properly drained (fig. 11), they are not suited to cultivated crops. If drained, they are moderately well suited to corn, grain sorghum, and soybeans and are well suited to a mixture of tall fescue and Ladino clover for permanent pasture. Row crops can be grown year after year if residue is returned, but a more satisfactory cropping system consists of 4 years of fescue followed by 2 years of row crops.

Unit VIe–31

This unit consists of well-drained, moderately steep soils on uplands. These soils are slightly to moderately eroded. The surface layer is very friable, dark grayish-brown to reddish-brown gravelly sandy loam. The subsoil is yellowish-brown to red sandy clay to clay that is easily penetrated by roots and water to a depth of 30 inches or more.

Runoff is rapid, infiltration is medium, permeability is moderate, and the available water capacity is moderately high. The supply of organic matter is low. The reaction is strongly acid.

These soils can be worked throughout a fairly wide range of moisture content without clodding or crusting. They are not suited to row crops but are fairly well suited to small grain, sericea lespedeza, bahiagrass, and bermudagrass. Erosion is a major hazard in cultivated areas. Most of the acreage is wooded.

Unit VIe–32

This unit consists of well-drained, strongly sloping to moderately steep soils on uplands. These soils are moderately eroded. The surface layer is dark grayish-brown to reddish-brown gravelly sandy loam, sandy loam, or slaty loam and is 3 to 6 inches thick. The subsoil is either a thin layer of yellowish-red to red clay to sandy clay or a thin, discontinuous layer of yellowish-red clay loam; either is easily penetrated by roots and water. The root zone is shallow. The depth to bedrock ranges from 2 to 10 feet.

***Figure 11.*—Dragline drainage ditch removes surface water and improves internal drainage. The soil is Wehadkee fine sandy loam, which is in capability unit IVw–31.**

Infiltration is medium, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are not suited to row crops but are fairly well suited to sericea lespedeza, bahiagrass, and bermudagrass. They are highly susceptible to erosion. They need to be protected by permanent vegetation, which helps to control erosion, increases the supply of organic matter, and improves the available water capacity.

Unit VIe–331

This unit consists of well-drained, strongly sloping soils on uplands. These soils are severely eroded. The surface layer is yellowish-brown to yellowish-red gravelly clay loam or gravelly sandy clay loam. The subsoil is yellowish-brown to red sandy clay or clay that can be penetrated by roots and water to a depth of 24 inches or more. The depth to bedrock ranges from 3 to 15 feet. Rills and shallow gullies are common, and there are a few deep gullies.

Infiltration is slow, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are in poor tilth and can be worked within only a narrow range of moisture content without clodding and crusting. They are suited to sericea lespedeza, bahiagrass, and bermudagrass but are not suited to row crops. They are highly susceptible to erosion and need to be protected by vegetation at all times.

Unit VIs–31

This unit consists of shallow, well-drained, sloping and strongly sloping, stony soils on uplands. These soils are moderately eroded. The surface layer is friable, dark grayish-brown to yellowish-red stony sandy loam to stony clay loam. The subsoil is a thin, discontinuous layer of yellowish-red to yellowish-brown clay loam. The root zone is shallow. The depth to partly weathered material is ordinarily 10 to 20 inches. The depth to bedrock ranges from 2 to 10 feet.

Infiltration is medium to rapid, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are too stony to be used for cultivated crops. They are better suited to trees.

Unit VIIe–331

This unit consists of well-drained, moderately steep soils on uplands. These soils are severely eroded. The surface layer is yellowish-brown to yellowish-red gravelly sandy clay loam or gravelly clay loam and is 2 to 5 inches thick. The subsoil is yellowish-brown to red sandy clay to clay that can be penetrated by roots and water to a depth of 24 inches or more. The depth to bedrock ranges from 3 to 15 feet. Rills and shallow gullies are common, and there are a few deep gullies.

Runoff is rapid, infiltration is slow, and permeability is moderate. The supply of organic matter is low, and natural fertility is low.

These soils are in poor tilth and are too shallow, too steep, too droughty, or too severely eroded to be used for cultivated crops. They are better suited to trees. A few of the smoother slopes can be used as pasture. Erosion is a major hazard.

Unit VIIe–32

This unit consists of well-drained, moderately steep to steep soils on uplands. These soils are moderately eroded. The surface layer is dark grayish-brown to reddish-brown gravelly sandy loam or slaty loam and is 3 to 6 inches thick. In places it is underlain by a thin layer of yellowish-red or strong-brown clay loam. The root zone is shallow. Weathered schist extends to a depth of 10 feet or more in most places.

Infiltration is medium, permeability is rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are too thin, too steep, or too droughty to be used for cultivated crops. They are better suited to trees. A few of the smoother slopes can be used as pasture.

Unit VIIe–333

This unit consists of one land type, Gullied land, that is rough and sloping to steep. This land type has a network of deep gullies that usually cut well into the parent material and cannot be crossed with farm machinery. Profiles have been completely destroyed except in small areas between gullies.

Infiltration is very slow, and the available water capacity is low. The supply of organic matter is very low, and fertility is very low.

This land type is not suited to cultivated crops, pasture crops, or hay crops. It can be planted to kudzu or pine trees and can be managed so that it affords protection for the watershed.

Unit VIIs–31

This unit consists mainly of shallow, well-drained, strongly sloping to steep, stony soils on uplands and terrace escarpments. These soils are slightly to moderately eroded. The surface layer is dark grayish-brown to reddish-brown stony sandy loam 3 to 7 inches thick. The subsoil is a thin, discontinuous layer of yellowish-red to yellowish-brown clay loam. The root zone is shallow. The depth to partly weathered material is ordinarily 10 to 20 inches. Included in this unit is one land type in which rock outcrops are common and stones 10 inches to 3 feet in diameter cover 50 to 75 percent of the surface and are embedded throughout the profile.

Runoff is rapid, infiltration is medium, permeability is slow to rapid, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are too stony to be used for cultivated crops or for pasture. They are better suited to trees.

Unit VIIs–332

This unit consists of shallow, well-drained, strongly sloping to steep, eroded, stony soils on uplands. The surface layer is brown to yellowish-red stony clay loam. The subsoil is a thin, discontinuous layer of yellowish-red to red clay loam. The root zone is shallow. Weathered schist extends to a depth of 10 feet or more. Shallow gullies are common, and a few deep ones have formed.

Infiltration is medium, permeability is moderate, and the available water capacity is low. The supply of organic matter is low, and natural fertility is low. The reaction is strongly acid.

These soils are too stony to be used for cultivated crops or for pasture. They are better suited to trees.

Unit VIIIs–39

This unit consists of one land type, Rock land, that has outcrops of granite and gneiss on 75 percent or more of its surface. In some areas the rock is covered with very shallow, coarse sandy soil material that supports a sparse stand of cedar, oak, and scrub pine. In other areas the vegetation consists of lichens and moss. This land type can be managed so that it affords protection for the watershed. To a limited extent, it can be developed as a recreational area.

Predicted Yields

Predicted yields of the main crops grown in Randolph County, under two levels of management, are shown in table 2. Predictions were made only for soils that are suited to and productive of the particular crop and for soils that, if well managed, do not erode to a damaging extent.

The predictions are based partly on information obtained from farmers, agricultural leaders, and the Alabama Agricultural Experiment Station and partly on observations made by the survey party during the course of the soil survey.

The "A" columns in table 2 show the yields that can be expected if average management is practiced and a complete fertilizer is applied at a rate of 300 to 400 pounds per acre. The "B" columns show the yields that can be expected if improved management is practiced and a complete fertilizer is applied at a rate of 600 to 700 pounds per acre.

For pasture, the "A" columns show the yields of grass and clover mixtures that can be expected from permanent pasture that is poorly managed and receives only small amounts of commercial fertilizer. The "B" columns show yields that can be expected from permanent pasture that is limed and fertilized at planting time and is kept well fertilized according to the results of soil tests.

Use of the Soils For Woodland [2]

Woodland originally covered all of Randolph County. Now it covers 72 percent of the county, or about 265,600 acres. The predominant forest types are pine, pine-hardwood, and bottom-land hardwood.

The county produces a variety of good commercial species. Pine, the most abundant, occupies most of the upland area and the eroded fields that have been retired from cultivation; natural reseeding accounts for a large acreage. Loblolly pine, shortleaf pine, longleaf pine, and Virginia pine are the principal species. Good-quality hardwoods, principally yellow-poplar, sweetgum, white oak, red oak, ash, sycamore, and hickory make up almost 40 percent of the growing stock.

[2] W. C. AIKEN, woodland conservationist, Soil Conservation Service, assisted with the preparation of this section.

TABLE 2.—*Predicted average yields per acre of principal crops under two levels of management*

[Figures in columns A indicate yields under common management; figures in columns B indicate yields under improved management. Absence of figure indicates the crop is not suited to the soil specified or is not commonly grown]

Soil	Cotton (lint)		Corn		Oats		Coastal bermudagrass		Sericea lespedeza		Pasture			
											Fescue and white clover [1]		Common bermudagrass [2]	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
	Lb.	*Lb.*	*Bu.*	*Bu.*	*Bu.*	*Bu.*	*Tons*	*Tons*	*Tons*	*Tons*	*Cow-acre-days* [3]	*Cow-acre-days* [3]	*Cow-acre-days* [3]	*Cow-acre-days* [3]
Altavista fine sandy loam, 2 to 6 percent slopes	300	600	30	70	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Altavista fine sandy loam, 0 to 2 percent slopes			40	80	35	65	2.0	4.0	2.0	3.0	155	230	90	150
Altavista gravelly fine sandy loam, 2 to 6 percent slopes	300	600	30	70	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Altavista gravelly fine sandy loam, 6 to 10 percent slopes, eroded	275	500	25	55	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Appling sandy loam, 2 to 6 percent slopes, eroded	350	750	30	70	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Appling sandy loam, 6 to 10 percent slopes, eroded	300	600	25	65	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Appling gravelly sandy loam, 2 to 6 percent slopes, eroded	350	750	30	70	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Appling gravelly sandy loam, 6 to 10 percent slopes, eroded	300	600	25	65	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Augusta fine sandy loam, 0 to 2 percent slopes			15	40							90	180	75	120
Augusta fine sandy loam, 2 to 6 percent slopes			20	45							90	180	75	120
Buncombe loamy sand			15	30	25	45	1.0	3.0	1.0	2.0	85	170	65	120
Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded	375	775	30	65	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Cecil gravelly sandy loam, 6 to 10 percent slopes, eroded	325	650	25	55	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Cecil gravelly sandy loam, 10 to 15 percent slopes, eroded	250	475	20	50	25	45	1.5	3.5	1.5	2.5	95	170	60	120
Cecil gravelly clay loam, 2 to 6 percent slopes, severely eroded	260	490	20	50	25	50	1.5	3.0	1.8	2.8	95	160	80	130
Cecil gravelly clay loam, 6 to 10 percent slopes, severely eroded	200	400	15	40	20	40	1.5	2.5	1.5	2.0	60	130	65	120
Cecil gravelly clay loam, 10 to 15 percent slopes, severely eroded									.5	1.0	50	120	45	100
Cecil gravelly clay loam, 15 to 25 percent slopes, severely eroded														
Cecil-Madison-Urban land complex														
Chewacla silt loam			45	85			1.0	2.0			170	220	60	110
Congaree silt loam			50	90	40	70	2.0	4.0	2.5	3.5	160	230	90	160
Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded	375	775	30	65	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Davidson gravelly sandy loam, 6 to 10 percent slopes, eroded	325	650	25	55	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Davidson gravelly sandy loam, 10 to 15 percent slopes, eroded	250	475	20	50	25	50	1.5	3.5	1.5	2.5	95	170	55	115
Davidson gravelly sandy loam, 15 to 25 percent slopes, eroded									.8	1.0	45	90	35	70
Davidson gravelly clay loam, 2 to 6 percent slopes, severely eroded	260	490	20	50	25	55	1.5	2.5	1.5	2.0	90	160	55	120
Davidson gravelly clay loam, 6 to 10 percent slopes, severely eroded	200	400	15	40	20	40	1.0	2.0	1.0	2.0	60	130	50	115
Davidson gravelly clay loam, 10 to 15 percent slopes, severely eroded	200	400	15	40	20	40	1.0	2.0	1.5	2.0	60	130	50	115
Gullied land														
Hulett gravelly fine sandy loam, 6 to 10 percent slopes	300	600	25	65	25	55	1.8	3.8	1.8	2.8	100	180	60	120

See footnotes at end of table.

TABLE 2.—*Predicted average yields per acre of principal crops under two levels of management*—Continued

Soil	Cotton (lint)		Corn		Oats		Coastal bermuda-grass		Sericea lespedeza		Pasture			
											Fescue and white clover [1]		Common bermuda-grass [2]	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
	Lb.	*Lb.*	*Bu.*	*Bu.*	*Bu.*	*Bu.*	*Tons*	*Tons*	*Tons*	*Tons*	*Cow-acre-days* [3]	*Cow-acre-days* [3]	*Cow-acre-days* [3]	*Cow-acre-days* [3]
Hulett gravelly fine sandy loam, 2 to 6 percent slopes, eroded	350	750	30	70	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Hulett gravelly fine sandy loam, 6 to 10 percent slopes, eroded	300	600	25	65	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Louisa stony sandy loam, 15 to 40 percent slopes														
Louisa stony sandy loam, 10 to 15 percent slopes														
Louisa stony sandy clay loam, 6 to 10 percent slopes, eroded									.5	1.5	45	90	50	
Louisa stony sandy clay loam, 10 to 15 percent slopes, eroded														
Louisa stony sandy clay loam, 15 to 40 percent slopes, eroded														
Louisa gravelly sandy loam, 6 to 10 percent slopes									1.5	2.0	70	120	45	90
Louisa gravelly sandy loam, 10 to 15 percent slopes									.8	1.0	45	90	35	70
Louisa gravelly sandy loam, 15 to 40 percent slopes														
Louisa slaty loam, 10 to 15 percent slopes									.5	1.0	65	120	55	110
Louisa slaty loam, 15 to 40 percent slopes														
Louisburg stony sandy loam, 6 to 10 percent slopes, eroded									.5	1.5	60	100	50	95
Louisburg stony sandy loam, 10 to 25 percent slopes, eroded									.5	1.5	60	100	50	95
Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded	375	775	30	65	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded	325	650	25	55	30	55	1.8	3.8	1.8	2.8	100	180	60	120
Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded	250	475	20	50	25	50	1.5	3.5	1.5	2.5	95	170	55	115
Madison gravelly fine sandy loam, 15 to 25 percent slopes, eroded							1.0	2.0	1.0	2.0	95	170	55	115
Madison gravelly clay loam, 2 to 6 percent slopes, severely eroded	260	490	20	50	25	50	1.5	2.5	1.5	2.0	90	160	55	120
Madison gravelly clay loam, 6 to 10 percent slopes, severely eroded	200	400	15	40	20	50	1.0	2.0	1.0	2.0	60	130	50	115
Madison gravelly clay loam, 10 to 15 percent slopes, severely eroded									.5	1.0	50	110	45	100
Madison gravelly clay loam, 15 to 25 percent slopes, severely eroded														
Mantachie fine sandy loam			45	85			1.0	2.0			170	220	60	110
Ochlockonee fine sandy loam			50	90	40	70	2.0	4.0	2.5	3.5	160	230	90	160
Ochlockonee fine sandy loam, local alluvium	375	775	40	85	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Pacolet sandy loam, 6 to 10 percent slopes, eroded									1.0	1.8	60	100	60	100
Pacolet sandy loam, 10 to 15 percent slopes, eroded									.8	1.0	45	90	35	70
Pacolet sandy loam, 15 to 25 percent slopes, eroded									.8	1.0	45	90	35	70

See footnotes at end of table.

TABLE 2.—*Predicted average yields per acre of principal crops under two levels of management*—Continued

Soil	Cotton (lint)		Corn		Oats		Coastal bermudagrass		Sericea lespedeza		Pasture			
											Fescue and white clover [1]		Common bermudagrass [2]	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
	Lb.	*Lb.*	*Bu.*	*Bu.*	*Bu.*	*Bu.*	*Tons*	*Tons*	*Tons*	*Tons*	*Cow-acre-days* [3]	*Cow-acre-days* [3]	*Cow-acre-days* [3]	*Cow-acre-days* [3]
Pacolet clay loam, 6 to 15 percent slopes, severely eroded														
Roanoke silt loam			10	30							160	210		
Rock land														
Stony rough land														
Terrace escarpment														
Wedowee gravelly sandy loam, 6 to 10 percent slopes, eroded									1.0	2.0	65	110	60	110
Wedowee gravelly sandy loam, 10 to 15 percent slopes, eroded									.8	1.0	45	90	35	70
Wedowee gravelly sandy loam, 15 to 25 percent slopes, eroded									.8	1.0	45	90	35	70
Wedowee gravelly sandy clay loam, 6 to 10 percent slopes, severely eroded									.5	1.0	60	100	45	100
Wedowee gravelly sandy clay loam, 10 to 15 percent slopes, severely eroded									.5	1.0	60	100	45	100
Wedowee gravelly sandy clay loam, 15 to 25 percent slopes, severely eroded														
Wehadkee fine sandy loam			10	30							160	210		
Wehadkee and Mantachie soils			10	30							160	210		
Wickham fine sandy loam, 2 to 6 percent slopes, eroded	375	775	30	65	30	60	2.0	4.0	2.0	3.0	130	200	75	130
Wickham fine sandy loam, 6 to 10 percent slopes, eroded	325	650	25	55	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Wickham fine sandy loam, 10 to 15 percent slopes, eroded	250	475	20	50	20	45	1.5	3.5	1.5	2.5	95	170	55	115
Wickham gravelly fine sandy loam, 6 to 10 percent slopes, eroded	300	600	25	65	25	55	1.8	3.8	1.8	2.8	100	180	60	120
Wickham gravelly fine sandy loam, 10 to 15 percent slopes, eroded	250	475	20	50	25	45	1.5	3.5	1.5	2.5	95	170	50	110
Wilkes sandy loam, 6 to 10 percent slopes, eroded									.5	1.5	60	100	50	95
Wilkes stony sandy loam, 10 to 15 percent slopes, eroded														

[1] Ladino clover may be substituted for white clover.
[2] Bahiagrass or dallisgrass may be substituted for common bermudagrass.
[3] Number of days 1 acre will provide grazing for 1 cow, 1 horse, 1 steer, or 5 swine without injury to the pasture. A soil that can support two animal units on 1 acre for 140 days is rated 2 times 140, or 280 cow-acre-days.

All of the woodland in the county has been cut over several times. The average stand now contains approximately 1,250 board feet per acre, mostly in small, fast-growing trees. Logs are supplied to 11 sawmills, and pulpwood is furnished to 5 pulpmills. The volume of wood products cut in 1962 was 65,883 cords of pulpwood and 12,600,000 board feet of lumber (*8*).[3]

Woodland Suitability Groups

Management of woodland can be planned more effectively if soils are grouped according to those characteristics that affect growth of trees and management of the stands. The soils in Randolph County have been placed in seven woodland suitability groups. Each group consists of soils that are suited to the same kinds of trees, that need the same management, and that have about the same potential productivity.

The factors considered in placing each soil in a woodland group include (1) potential productivity, expressed as a site index; (2) species preferred for planting; and (3) soil-related hazards and limitations to be considered in management. These factors are explained in the pages that follow.

Site index indicates the potential productivity of a soil for a given species. It is the height, in feet, that the dominant trees of the given species, growing on a specified soil, will reach in 50 years. Site indexes were taken on

[3] Italic numbers in parentheses refer to Literature Cited, p. 62.

107 individual plots in Randolph County and were then compared with site indexes taken from plots of similar soils throughout the Piedmont Plateau. The site indexes compiled from these data and shown in the descriptions of the woodland groups are averages that have been rounded off to the nearest 10 feet; no one of them represents a specific soil. The growth rates for pine are for fully stocked, natural stands, as shown in tables 58 and 122 of the United States Department of Agriculture Miscellaneous Publication 50 (*6*). Hardwood yields for well-stocked stands were computed from table 7 of the United States Department of Agriculture Handbook 181 (*7*), using the procedures suggested by the authors.

About 3,092 acres in the county is made up of a soil-urban land complex and of land types, none of which were assigned to a woodland group. For these areas it was impractical to obtain production data and site indexes or to make general suggestions about management. Generally, the species to be planted or to be favored in management are loblolly pine and Virginia pine.

The soils of each group have, in varying degrees, limitations that affect management. The nature of these limitations and the relative degrees of limitation, are as follows.

Equipment limitation: Drainage, slope, soil texture, or other soil characteristics may restrict or prohibit the use of ordinary equipment used in pruning, thinning, harvesting, or other management operations. On different soils it may be necessary to use different kinds of equipment and different methods of operation, or to use equipment at different seasons. The limitation is *slight* if there are no restrictions on the type of equipment or on the time of year that the equipment can be used. It is *moderate* if slopes are moderately steep, if the use of heavy equipment is restricted by wetness for no more than 3 months of the year, or if the use of equipment damages the tree roots to some extent. The limitation is *severe* on moderately steep and steep soils that are stony and have rock outcrops. It is also severe if the use of equipment is restricted by wetness for more than 3 months of the year.

Plant competition: When woodland is disturbed by fire, cutting, grazing, or other means, it is likely to be invaded by undesirable brush, trees, and other plants. The invaders compete with and hinder the establishment and growth of desirable trees. Competition is *slight* if unwanted plants create no special problem. It is *moderate* if the invaders delay but do not prevent the establishment of a normal, fully stocked stand. If competition is moderate, seedbed preparation generally is not needed and simple measures will prevent invasion by undesirable plants. Competition is *severe* if it prevents the regeneration of desirable trees in sufficient numbers to maintain a full stand. If competition is severe, site preparation is needed and management should include controlled burning, spraying with chemicals, and girdling.

Seedling mortality: Even when healthy seedlings of suitable species are correctly planted or occur naturally in adequate numbers, some of them will not survive if soil characteristics are unfavorable. Mortality is *slight* if less than 25 percent of the seedlings die. It is *moderate* if 25 to 50 percent die and replanting is necessary to fill in the stand. It is *severe* if more than 50 percent die and special site preparation is necessary to maintain a full stand. Site preparation may include contour furrowing, brush damming, subsoiling, scalping, and unusual care in planting seedlings.

Windthrow hazard: Soil characteristics affect the development of tree roots and the firmness with which these roots anchor the tree in the soil. Root development may be prevented by a high water table or by an impermeable layer. The windthrow hazard is *slight* if trees are firmly anchored and individual trees are stable during high winds. The hazard is *moderate* if trees are firmly anchored except during periods of excessive wetness and very high winds. The hazard is *severe* if individual trees are unstable during winds of high velocity.

Erosion hazard: Woodland can be protected from erosion by choosing the kinds of trees, by adjusting the rotation age and cutting cycle, by using special techniques in management, and by carefully constructing and maintaining roads, trails, and landings. The erosion hazard is rated according to the risk of erosion on well-managed woodland that is not protected by special practices. It is *slight* if a small loss of soil is expected. Generally, the hazard is slight if the slope range is no more than 2 percent and runoff is slow or very slow. The erosion hazard is *moderate* if a moderate loss of soil can be expected because runoff is not controlled and the vegetative cover is not adequate for protection. It is *severe* if steep slopes, rapid runoff, slow infiltration, slow permeability, and past erosion make the soil highly susceptible to erosion.

Woodland group 1

This group consists of deep, moderately well drained and well drained, slightly eroded or moderately eroded soils on uplands and terraces. The surface layer of these soils is very friable and is 4 to 10 inches thick. The subsoil is friable to firm sandy clay loam to clay. Permeability is moderate, and the available water capacity is moderately high.

The soils of this group are moderately productive. The average site indexes at age 50 are: loblolly pine 80, shortleaf pine 70, longleaf pine 70, Virginia pine 70, yellow-poplar 80, and upland oak 70. The approximate yearly growth rates in well-stocked, natural stands up to age 60, in board feet per acre (Doyle log rule), are: loblolly pine 270, shortleaf pine 210, and yellow-poplar 220. The erosion hazard is slight to moderate. Proper location and careful maintenance of roads and trails on the steeper slopes are important. The equipment limitation is slight to moderate. Regular logging and harvesting equipment can be used except during and immediately following rainy periods.

Seedling mortality is slight, but the growth and establishment of seedlings may be delayed by moderate plant competition. The windthrow hazard is slight.

Species preferred for planting are, in order of preference, loblolly pine, slash pine, and Virginia pine. Planting shortleaf pine is generally inadvisable because of the prevalence of littleleaf disease.

About 78,229 acres is in this group.

Woodland group 2

This group consists of deep, well-drained, severely eroded soils on uplands and terraces. The surface layer, which is predominantly subsoil material, is friable and is 2 to 4 inches thick. The subsoil is friable to firm sandy clay to clay. Infiltration is slow, and permeability is moderate.

The soils of this group are low in productivity, mainly because erosion has removed much of the original surface layer. The average site indexes at age 50 are: loblolly pine 70, Virginia pine 70, longleaf pine 60, and shortleaf pine 60. The approximate yearly growth rate in well-stocked, natural stands of loblolly pine up to age 60 is 170 board feet per acre (Doyle rule).

Gullies and steep slopes make the erosion hazard severe. Roads and trails should be located on ridgetops and laterally along the contour. The equipment limitation is moderate.

Seedling mortality is moderate; erosion has made it difficult to establish stands of desirable trees, and replanting is often necessary. Shallowness, low fertility, and shortage of available moisture make plant competition slight. The windthrow hazard is slight.

Species preferred for planting are, in order of preference, loblolly pine (fig. 12) and Virginia pine.

About 80,599 acres is in this group.

Woodland group 3

This group consists of shallow, well-drained, slightly eroded or moderately eroded soils on uplands. The surface layer of these soils is very friable and is 4 to 10 inches thick. The subsoil is thin and discontinuous. Permeability is rapid, and the water-holding capacity is low.

The soils of this group are moderately productive. The average site indexes at age 50 are: loblolly pine 70, shortleaf pine 70, Virginia pine 80, and longleaf pine 70.

The approximate yearly growth rate in well-stocked, natural stands of loblolly pine up to age 60 is 170 board feet per acre (Doyle rule).

The erosion hazard is moderate to severe. Proper location of roads and trails is important. Ordinary equipment can be used, but the limitation is moderate on steep slopes.

Shallowness, low fertility, and shortage of available moisture make seedling mortality moderate and plant competition slight. The windthrow hazard is moderate;

Figure 12.—**A thinned stand of young loblolly pine. The soil is Madison gravelly clay loam, 6 to 10 percent slopes, severely eroded, which is in woodland group 2.**

the thin surface layer and subsoil restrict root development, and trees are thrown by strong winds during wet seasons.

Species to be favored in management and preferred for planting are, in order of preference, loblolly pine and Virginia pine. Healthy, established shortleaf pine is to be favored in management, but planting this species is inadvisable because of the prevalence of littleleaf disease.

About 163,352 acres is in this group.

Woodland group 4

This group consists of shallow, well-drained, upland soils that are severely eroded. The surface layer of these soils is stony clay loam and is 2 to 4 inches thick. In some places it is underlain by a thin subsoil, and in others by weathered bedrock. Infiltration is slow, permeability is rapid, and the water-holding capacity is low.

The soils in this group are suited only to conifers and are low in productivity. The average site indexes at age 50 are: Virginia pine 70, loblolly pine 60, longleaf pine 60, and shortleaf pine 60. The approximate yearly growth rates in well-stocked, natural stands up to age 60, in board feet per acre (Doyle rule), are: loblolly pine 170 and shortleaf pine 130.

The erosion hazard is severe. Steepness, shallowness, and past erosion make the equipment limitation moderate to severe. It is important to prevent further erosion on the roads and in areas where timber is harvested.

Seedling mortality is moderate, and plant competition is slight. The windthrow hazard is severe. In thinning stands, it is important to avoid exposing individual trees.

All of the pines for which site indexes are given are to be favored in management, but it is advisable to plant only loblolly pine and Virginia pine.

About 5,488 acres is in this group.

Woodland group 5

This group consists of deep, well-drained to somewhat poorly drained soils on first bottoms and in depressions. The surface layer of these soils is friable silt loam to sandy loam. It is underlain by a mixture of materials. Permeability is moderate, and the water-holding capacity is moderately high.

The soils in this group are the most productive of wood crops of any soils in the county, and they have few management problems. They are well suited to pines and good-quality hardwoods. The average site indexes at age 50 are: yellow-poplar 100, loblolly pine 100, sweetgum 100, oak 90, and shortleaf pine 80. The approximate yearly growth rates in well-stocked, natural stands up to age 60, in board feet per acre (Doyle rule), are: yellow-poplar 430, loblolly pine 490, and sweetgum 430.

The erosion hazard is slight. The equipment limitation is moderate to severe; some of the soils are likely to stay wet for several months, and roots may be damaged if heavy machinery is used.

Seedling mortality is slight, and competition from invading, undesirable plants is severe. The competing vegetation needs to be removed in order to insure a fully stocked stand of any one species. The windthrow hazard is moderate. Planting is usually unnecessary.

About 29,712 acres is in this group.

Woodland group 6

This group consists of poorly drained or somewhat poorly drained soils on low stream terraces and first bottoms. These soils have a high water table. The surface layer is friable silt loam to sandy loam. The subsoil is a mixture of materials and is mottled. Permeability is slow, and the water-holding capacity is high. Flooding is a hazard.

The soils in this group are highly productive of wood crops and are well suited to good-quality hardwoods. Pines grow well where the water table is not too high. The average site indexes at age 50 are: yellow-poplar 100, sweetgum 100, oak 80, loblolly pine 100, and shortleaf pine 90. The approximate yearly growth rates in well-stocked, natural stands up to age 60, in board feet per acre (Doyle rule), are: yellow-poplar 430 and loblolly pine 490.

The erosion hazard is slight. The equipment limitation is severe, as these soils are wet for several months in winter and spring and roots are damaged if heavy equipment is used.

Seedling mortality is slight, and plant competition is severe. The less desirable plants need to be removed in order to insure a fully stocked stand of any one species. The windthrow hazard is moderate to severe. Root systems are shallow because of the high water table, and individual trees are likely to be windthrown during winds of high velocity.

Species to be favored in management are yellow-poplar, sweetgum, oak, and loblolly pine. Planting usually is unnecessary. Desirable species are likely to reseed naturally.

About 10,362 acres is in this group.

Woodland group 7

The one soil in this group, Buncombe loamy sand, is deep, loose, and excessively drained. It is on first bottoms. It is likely to be overwashed and scoured. Permeability is very rapid, and the water-holding capacity is low.

This soil is moderately to highly productive of wood crops. Once the roots have grown into the moist layers of this soil, trees do well. The average site indexes at age 50 are: yellow-poplar 90, sweetgum 90, loblolly pine 80, and oak 80. The approximate yearly growth rates in well-stocked, natural stands up to age 60, in board feet per acre (Doyle rule), are: yellow-poplar 430 and loblolly pine 370.

The erosion hazard, equipment limitation, and windthrow hazard are slight. Seedling mortality and plant competition are moderate. During periods of drought, there is not enough moisture in the soil to meet the needs of seedlings or invading plants. Species preferred for planting are, in order of preference, loblolly pine and slash pine.

About 1,006 acres is in this group.

Use of the Soils For Wildlife and Fish [4]

Many of the soils of Randolph County produce food, cover, and protection for many species of wildlife. Some species frequent woodland, others prefer open farmland, and many require a water habitat.

[4] ROBERT E. WATERS, biologist, Soil Conservation Service, assisted with the preparation of this section.

Bobwhites, mourning doves, rabbits, squirrels, and nongame birds are common throughout the county. Deer and wild turkeys find suitable habitats in the fairly large areas of well-watered woodland. Wild ducks and beavers live on the bottom lands along the Tallapoosa and Little Tallapoosa Rivers. Beaver dams are common along these rivers and also along many of the smaller streams. Many farms have suitable sites for fishponds, and 10 streams in the county afford some fishing. These streams total 130 miles in length, have a surface area of 1,434 acres, and are 8 to 200 feet wide. Most of them, however, are too cool for bass and bluegill and too warm for trout. Bluegill, largemouth bass, redeye bass, and sunfish are the principal sport fish. The Tallapoosa and Little Tallapoosa Rivers also have crappie and various species of catfish.

The soils of the county have been placed in four groups on the basis of their suitability as habitats for specified kinds of wildlife. A description of each group is given in this section of the report. Table 3 rates the suitability of specific plants as food for particular kinds of birds and animals. Table 4 rates the suitability of each of these plants to the soils of each wildlife suitability group. Cover is abundant. The climate is such that cover can be grown readily if needed.

Practical help in planning and establishing good-quality habitats for wildlife or fish may be obtained from the work unit conservationist of the Soil Conservation Service.

A summary of the food and habitat needs of the more important wildlife species in the county follows.

BEAVER.—Beavers eat only vegetation, mostly bark, roots, and green plants. Tender bark or the cambium of alder, ash, birch, cottonwood, maple, pine, sweetgum, and willow is their principal tree food. Beavers also eat honeysuckle, grasses, weeds, and the tender shoots of elder. Acorns and corn are choice foods. The chief feeding areas are within 150 feet of water.

BOBWHITE.—Choice foods are acorns, beechnuts, blackberries, browntop millet, wild black cherries, corn, cowpeas, flowering dogwood, Japanese millet, annual lespedeza, bicolor lespedeza, mulberries, pecans, pine, common ragweed, sweetgum, tickclover (beggarlice), and wheat. Bobwhites also eat many insects. The food must be close to vegetation that provides shade and protection from predators and adverse weather.

DEER.—Choice foods are acorns, bahiagrass, clover, corn, cowpeas, Japanese honeysuckle, oats, rescuegrass, ryegrass, and wheat. Woodlands of 500 acres or more usually furnish adequate cover.

DOVE, MOURNING.—Choice foods are browntop millet, corn, Japanese millet, pine seed, pokeberry, common ragweed, sweetgum seed, and wheat. Doves do not eat insects, green leaves, or fruit. They drink water daily.

DUCK.—Choice foods are acorns, beechnuts, browntop millet, corn, Japanese millet, smartweed seed, and wheat. These foods must be covered with water to be readily available to ducks, but occasionally ducks will eat acorns and corn on dry land.

FOX, GRAY AND RED.—Mice, rabbits, grasshoppers, and fresh carrion, when available, make up 75 to 90 percent of the fox's diet. Foxes also eat apples, black cherries persimmons, other fruits, and corn.

RABBIT.—Choice foods are clover, oats, rescuegrass, rye, ryegrass, vetch, wheat, and other succulent vegetation. Long grass growing up through loose brush is probably the best natural cover. Sericea lespedeza provides good cover.

RACCOON.—About half of the raccoons' diet consists of crayfish, fish, frogs, and grasshoppers. The other half consists of blackberries, mulberries, persimmons, pokeberries, other fruits, acorns, and beechnuts.

SQUIRREL.—Choice foods are acorns, beechnuts, wild black cherry, corn, flowering dogwood, hickory nuts, mulberries, pecans, pine seeds, and wheat.

TURKEY, WILD.—Turkeys prefer large areas of woodland—generally 2,000 acres or more in size. They drink water daily and often roost in large trees over or near water. Choice foods include insects, acorns, bahiagrass, beechnuts, browntop millet, clover leaves, corn, cowpeas, flowering dogwood, wild grapes, blackberries, mulberries, oats, pecans, pine seeds, rescuegrass, ryegrass forage, and wheat.

NONGAME BIRDS.—Several species of nongame birds eat nothing but insects. Some eat insects, nuts, and fruits, and others eat insects, nuts, fruits, and acorns.

FISH.—Bass, bluegill, and channel catfish are the principal game fish (fig. 13). The choice foods of bluegill are insects, insect larvae, and aquatic worms. Bass and channel catfish feed on small fish. The supply of food depends on the fertility of the water, on the nature of the soils of the watershed, and somewhat on the nature of the soils in the bottom of the pond. For the most part, the ponds in Randolph County are low in fertility and the surrounding soils are acid. Consequently, fertilizer and lime are needed in ponds to insure the production of an adequate supply of food.

Wildlife group 1

This group consists of deep, well-drained soils on uplands and stream terraces. The slope range is 0 to 25 percent. The surface layer ranges from fine sandy loam to clay loam and is 3 to 10 inches thick. The subsoil is friable to firm sandy clay loam to clay. These soils are easy to work. Infiltration and permeability are moderate to rapid, and the available moisture capacity is moderately high. The erosion hazard is slight to severe in cultivated areas.

The soils in this group make up about 43 percent of the county, and about 35 percent of the acreage is cultivated or pastured. These soils are suited to many plants that are choice food for several species of wildlife. They are not suitable for flooding for duck fields. Many of the drainageways provide favorable sites for small farm ponds (fig. 14).

Wildlife group 2

This group consists of shallow, well-drained soils on uplands. The slope range is 6 to 40 percent. The surface layer is fine sandy loam and is 3 to 10 inches thick. The subsoil is thin, friable clay to clay loam. Permeability is moderate to moderately rapid, and the available moisture capacity is low. The erosion hazard is moderate to high.

The soils in this group make up about 45 percent of the county, and about 85 percent of the acreage is wooded. These soils are marginal for or poorly suited to most plants that support wildlife, because they are low in available moisture and are shallow over rock. Many of the drainageways provide favorable sites for small farm ponds.

TABLE 3.—*Suitability of specified plants as food for wildlife*

[Figure 1 indicates that the plant is choice food (attractive and nutritious); 2 indicates that the plant is fair (useful when choice foods are gone); 3 indicates that the plant is unimportant (may be eaten in small amounts)]

Plant	Bobwhite quail	Deer	Dove	Duck	Rabbit	Squirrel	Turkey	Raccoon	Nongame birds[1]		
									Grain and seed eaters	Acorn and nut eaters	Fruit eaters
Apple	3	1	3	3	2	2	3	2	3	3	2
Bahiagrass	3	1	3	3	3	3	1	3	2	3	3
Beech	3	2	3	2	3	1	1	2	3	1	3
Blackberry	1	2	3	3	2	1	2	2	3	3	1
Blackgum	2	3	3	2	3	2	2	2	3	3	1
Browntop millet	1	2	1	1	3	3	1	3	1	3	3
Cherry, black	1	3	3	3	2	1	2	2	3	3	1
Chufa	3	3	3	1	3	1	1	1	3	1	3
Clover	2	1	3	2	1	3	1	3	3	3	3
Corn	1	1	1	1	1	1	1	1	1	3	3
Cowpeas	1	1	2	3	2	3	2	3	3	3	3
Crabgrass	3	3	2	3	3	3	2	3	2	3	3
Cranesbill	2	3	1	3	3	3	3	3	3	3	3
Dewberry	1	2	3	3	2	1	2	3	3	3	1
Dogwood, flowering	2	2	3	3	3	2	1	2	3	3	1
Elderberry	3	2	3	3	3	3	3	3	3	3	1
Elm	3	2	3	3	3	1	3	3	2	3	3
Grape, wild	2	2	3	3	3	2	1	1	3	3	2
Greenbrier	3	1	3	3	1	3	2	2	3	3	2
Hackberry	3	2	3	3	3	3	2	2	3	3	1
Hickory	2	3	3	2	3	1	2	2	3	1	3
Honeysuckle, Japanese	2	1	3	3	3	3	2	3	3	3	1
Huckleberry	2	2	3	3	3	2	2	3	3	3	1
Japanese millet	1	3	1	1	1	3	3	3	1	3	3
Johnsongrass	2	2	2	3	3	3	3	3	2	3	3
Lespedeza, annual	1	2	2	3	2	3	2	3	3	3	3
Lespedeza, bicolor	1	2	3	3	2	3	3	3	3	3	3
Lespedeza, sericea	3	3	3	3	2	3	3	3	3	3	3
Lespedeza, wild	2	2	3	3	2	3	3	3	3	3	3
Maple	3	1	3	3	3	2	2	3	3	3	3
Milkpea (Galactia)	1	3	3	3	3	3	3	3	3	3	3
Mulberry	1	3	3	3	3	1	2	2	3	3	1
Oak	1	1	3	1	3	1	1	1	3	1	3
Oats	2	1	2	2	1	1	2	3	1	3	3
Partridgepea	2	2	3	3	3	3	3	3	3	3	3
Paspalum, bull	2	2	1	2	2	3	1	3	1	3	3
Peanut	2	1	2	3	3	1	2	2	3	1	3
Pecan	2	3	3	3	3	1	3	3	3	1	3
Persimmon	3	2	3	3	3	2	2	1	3	3	2
Pine	1	2	1	3	2	1	1	3	1	3	3
Pokeberry	3	1	1	3	3	3	2	2	3	3	3
Pyracantha	3	3	3	3	3	3	1	3	3	3	1
Ragweed, common	1	2	1	3	3	3	3	3	1	3	3
Rescuegrass	3	1	3	3	2	3	2	3	3	3	3
Rye	2	1	2	3	2	1	1	3	2	3	3
Ryegrass	3	1	3	3	1	3	1	3	3	3	3
Smartweed	3	3	3	1	3	3	3	3	3	3	3
Sorghum, grain[2]	1	1	1	1	1	1	1	3	1	3	3
Sourwood	3	1	3	3	3	3	3	3	3	3	3
Soybean	2	1	2	2	1	3	1	3	3	3	3
Sumac, smooth	2	2	3	3	2	3	2	3	3	3	2
Sweetgum	1	2	1	2	2	2	2	3	1	3	3
Tickclover (beggarlice)	1	2	3	3	2	3	2	3	3	3	3
Vetch	2	1	2	3	1	3	3	3	3	3	3
Walnut	3	3	3	3	3	1	3	3	3	1	3
Wheat	1	1	1	1	1	1	1	3	1	3	3
Yellow-poplar	3	3	3	3	3	3	2	3	3	3	3

[1] The grain and seed eaters are the blackbirds, cardinals, goldfinches, juncos, and sparrows. Chickadees, grackles, bluejays, titmice, and woodpeckers eat acorns and nuts. The fruit eaters are the bluebirds, catbirds, mockingbirds, robins, and cedar waxwings.

[2] Grain sorghum is a choice food of most grain feeders; however, it attracts flocks of unwanted birds, such as blackbirds, cowbirds, and sparrows. Grain sorghum also rots quickly in this humid climate. These factors limit its value and suitability as a wildlife food.

Figure 13.—**Farm pond furnishes fishing, swimming, boating, and other recreation. Such ponds are a source of income for many farms.**

Figure 14.—**Well-managed farm pond furnishes good fishing and recreation. Loblolly pine in background, on Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded, protects watershed. This soil is in wildlife group 1.**

Wildlife group 3

This group consists of deep, well drained and moderately well drained soils along and at the head of small drainageways and on first bottoms that are flooded occasionally. The surface layer is fine sandy loam to silt loam and is 5 to 15 inches thick. It overlies sandy loam to silty clay loam. These soils are easy to work. The available moisture capacity is moderately high to low. Erosion is no hazard except where floods cause scouring.

The soils in this group are well distributed and make up about 8 percent of the county. About 60 percent of the acreage is cultivated or pastured. These soils are suited to most of the plants that are choice food for wildlife.

Wildlife group 4

This group consists of deep, poorly drained, nearly level soils along and at the head of small drainageways, on first bottoms, on upland flats, and on low stream terraces. The surface layer is loam or silt loam and is 4 to 8 inches thick. The subsurface layer is gray sandy loam to clay. The soils on first bottoms are flooded frequently. These soils have a high water table and are covered with water for long periods. They are difficult to work and, unless artificially drained and protected from flooding, are poorly suited to cultivated crops. Erosion is no problem except where floods cause scouring.

The soils in this group make up about 3 percent of the county, and nearly all of the acreage is wooded. The only wildlife food plants to which these soils are suited are Japanese millet and smartweed for ducks and the woody plants eaten by beaver. Some areas are suitable for flooding for duck fields. There are many beaver dams.

TABLE 4.—*Suitability of plants to soils, by wildlife suitability groups*

[Figure 1 indicates that the plant is suited to the soils; 2 indicates marginal suitability; 3 indicates that the plant is either poorly suited or not suitable]

Plant	Soil groups			
	1	2	3	4
Apple	1	2	3	2
Bahiagrass	1	2	3	1
Beech	3	3	3	1
Blackberry	1	2	2	1
Blackgum	3	3	2	1
Browntop millet	1	2	3	1
Cherry, black	1	2	2	1
Chufa	1	2	3	1
Clover	1	2	2	1
Corn	1	2	2	1
Cowpeas	1	1	2	1
Crabgrass	1	2	2	1
Cranesbill	1	1	2	2
Dewberry	1	2	2	2
Dogwood, flowering	1	1	2	1
Elderberry	1	2	2	1
Elm	1	2	2	1
Grape, wild	1	1	2	1
Greenbrier	1	1	1	1
Hackberry	1	2	2	1
Hickory	1	2	2	1
Honeysuckle, Japanese	1	2	1	1
Huckleberry	1	1	3	3
Japanese millet	2	3	3	1
Johnsongrass	1	2	2	1
Lespedeza, annual	1	1	2	1
Lespedeza, bicolor	1	1	3	2
Lespedeza, sericea	1	1	3	2
Lespedeza, wild	1	1	3	2
Maple	2	3	3	1
Milkpea (Galactia)	1	1	3	2
Mulberry	1	2	3	1
Oak	1	1	1	1
Oats	1	1	2	2
Partridgepea	1	2	2	1
Paspalum, bull	1	2	2	1
Peanut	1	2	2	2
Pecan	1	3	3	1
Persimmon	1	2	2	2
Pine	1	1	1	1
Pokeberry	1	2	2	1
Pyracantha	1	2	2	3
Ragweed, common	1	1	2	2
Rescuegrass	1	2	2	2
Rye	1	2	2	2
Ryegrass	1	1	2	1
Smartweed	3	3	3	1
Sorghum, grain [1]	1	2	2	1
Sourwood	1	1	2	1
Soybean	1	2	2	1
Sumac, smooth	1	2	2	2
Sweetgum	2	2	2	1
Tickclover (beggarlice)	1	1	1	3
Vetch	1	2	2	1
Walnut	1	2	2	1
Wheat	1	2	3	2
Yellow-poplar	2	3	3	1

[1] Grain sorghum is a choice food of most grain feeders but is limited in value and suitability because the humid climate causes it to rot and because it attracts undesirable birds, such as blackbirds, cowbirds, and sparrows.

Use of the Soils For Engineering [5]

This soil survey was made primarily for agricultural purposes, but it contains information that is of use to engineers. Special emphasis has been placed on the engineering properties that affect irrigation, farm ponds, and structures to conserve soil and water. The properties most important to engineers are permeability, shear strength, compaction characteristics, drainage, shrink-swell characteristics, grain size, plasticity, corrosion potential, and reaction. Depth to water table, depth to bedrock, and topography also are important.

The information in this survey can be used to—

1. Make soil and land use studies that will aid in selecting and developing industrial, business, residential, and recreational sites.
2. Make preliminary estimates of the soil properties that affect the planning of agricultural drainage systems, farm ponds, irrigation systems, diversion terraces, and other structures for conservation of soil and water.
3. Make preliminary evaluations that will aid in selecting locations for highways, airports, pipelines, and cables and in planning detailed investigations at the selected locations.
4. Locate probable sources of gravel and other construction material.
5. Correlate performance of engineering structures with soil mapping units to develop information that will be useful in planning engineering practices and in designing and maintaining engineering structures.
6. Determine the suitability of soils for cross-country movement of vehicles and construction equipment.
7. Supplement the information obtained from other published maps and reports and aerial photographs to make maps and reports that can be used readily by engineers.
8. Develop other preliminary estimates for construction purposes.

With the soil map for identification of soil areas, the engineering interpretations reported here can be useful for many purposes. It should be emphasized that these interpretations may not eliminate the need for sampling and testing at the site of specific engineering works involving heavy loads and where the excavations are deeper than the depths of layers here reported. Even in these situations, the soil map is useful for planning more detailed field investigations and for suggesting the kinds of problems that may be expected.

Although the detailed soil map at the back of this survey and the tables in the following pages serve as guides for evaluating the soils, a detailed investigation at the site of proposed construction is needed because as much as 15 percent of an area designated as a specific soil on the map may consist of areas of other soils too

[5] Prepared by J. C. BUSH, agricultural engineer, and M. E. STEPHENS, State soil scientist, Soil Conservation Service, and engineers of the Alabama State Highway Department and the Bureau of Public Roads.

small to be shown on the published map. Additiona information on the properties of soils can be found in the sections "Formation, Morphology, and Classification of the Soils" and "How This Soil Survey Was Made."

Some of the terms used by soil scientists may have a special meaning in soil science and may be unfamiliar to or have a different meaning to engineers. These terms are defined in the Glossary.

Engineering Classification Systems

Two systems of classifying soils for engineering purposes are in general use: the AASHO system and the Unified system. Both are used in this survey.

Most highway engineers classify soil materials in accordance with the system approved by the American Association of State Highway Officials (AASHO) (*2*). In this system, all soil materials are classified in seven principal groups. The groups range from A–1, which consists of soils that have the highest bearing capacity, to A–7, which consists of soils that have the lowest strength when wet. The relative engineering value of the soils within each group is indicated by a group index number. These numbers range from 0 for the best materials to 20 for the poorest.

Some engineers prefer to use the Unified classification system (*10*). This system is based on identification of soils according to their texture and plasticity and on their performance as engineering construction material. Soil materials are identified as coarse grained—gravels (G) and sands (S)—and fine grained—silts (M) and clays (C). SM and SC identify sands that contain fines of silt and clay; ML and CL, silts and clays that have a low liquid limit; MH and CH, silts and clays that have a high liquid limit; and GM and CM, gravels and clays that contain fines of silt.

Engineering Test Data

Samples of the principal types of nine extensive soil series in Randolph County were tested, according to standard procedures, by the Alabama State Highway Department. The results of these tests are shown in table 5.

The test data show some variations in physical properties, but they probably do not show the maximum variations in the B and C horizons of each series. All samples were obtained within a depth of 7 feet. Consequently, the data may not be adequate for estimating the characteristics of soil material in deep cuts in rolling or hilly topography.

Some of the soil types were sampled in two or more places. The ortho profile is the most nearly typical of the series as it occurs in this county. The other profiles were sampled to show significant variations within the concept of the series.

The engineering classifications in table 5 are based on data obtained by mechanical analysis and by tests made to determine liquid limits and plastic limits. The AASHO classifications include the group index numbers.

Estimated Properties

Table 6 gives, for the soils of each series recognized in the county, estimates of soil properties significant in engineering and estimates of the engineering classifications of the soils according to both the AASHO and the Unified systems. The estimates are for typical profiles, usually to a depth of no more than 7 feet. They are based on the test data shown in table 5, on test data obtained from similar soils in this county or from soils of other counties, or on past experience in engineering construction. Since the estimates are for only the ortho, or typical, soil profile, considerable variation from the estimates shown in table 6 should be anticipated.

Interpretation of Engineering Properties

Table 7 lists, for each soil series in Randolph County, interpretations of specific properties as they affect the suitability of the soils for various engineering purposes. These interpretations are based on the test data shown in table 5, on the estimates shown in table 6, and on field experience and performance. They apply only to the typical soil of each series and do not allow for variations within the series.

The northern and western parts of Randolph County (approximately ⅓ to ½ of the total area) are predominantly Louisa soils. These soils are very shallow and are underlain by rock. As a result, roadbuilding and other operations requiring earthmoving are somewhat difficult. Removal of large amounts of rock is necessary to achieve reasonable grades. There are several isolated areas of granite outcrops. Each area covers several acres. The outcrops make construction prohibitively expensive.

The terrace soils in the northeastern part of the county are underlain by thick beds of gravel suitable for roadbuilding material (fig.15, p. 48).

Formation, Morphology, and Classification of the Soils

This section discusses the factors that are involved in soil formation and relates them to the development of the soils in Randolph County. It explains the system of classification used in this survey, describes the great soil groups represented, and also describes a typical profile of a soil of each soil series in the county.

Formation of the Soils

Factors that contribute to the formation of soils are parent material, climate, living organisms, relief, and time. All of these factors are important, but in different locations and under different conditions, some have more effect than others.

Climate and vegetation are the active factors of soil formation, but the effects of climate and vegetation are modified by relief. Relief affects surface drainage, percolation of water, and the rate of erosion. The parent material, which also modifies the effects of climate and vegetation, affects the kind of profile that can be formed and in some places determines it almost entirely. Finally, time is needed for changing the parent material into a soil profile. Normally, a long period is required for the development of a distinct profile.

TABLE 5.—*Engineering*

[Tests performed by Division 4, Alabama State Highway Department, in accordance with

Soil type and location of sample	Parent material	Alabama report number	Depth from surface	Horizon	Moisture-density data [1]	
					Maximum dry density	Optimum moisture
			In.		*Lb. per cu. ft.*	*Pct.*
Appling gravelly sandy loam: SE¼NE¼ sec. 32, T. 21 S., R. 13 E. (Ortho).	Granite, gneiss, and schist.	1721	0 to 6	Ap	118	10
		1723	13 to 26	B2lt	112	15
		1765	41 to 67	C1	107	16
		1753	67 to 77	C2	110	17
Cecil gravelly sandy loam: NE¼NE¼ sec. 11, T. 21 S., R. 13 E. (Ortho).	Granite, gneiss, and schist.	1738	0 to 6	Ap	109	12
		1760	10 to 42	B2t	95	25
		1759	42 to 62	B3t	96	22
		1732	62 to 77	C	98	23
Cecil gravelly sandy loam: NW¼SW¼ sec. 12, T. 22 S., R. 12 E. (Grading to Lloyd).	Granite, gneiss, schist, and basic rocks.	1748	0 to 6	Ap	118	12
		1743	10 to 32	B2t	87	30
		1722	37 to 64	C	104	17
Chewacla silt loam: SE¼SE¼ sec. 1, T. 22 S., R. 10 E. (Ortho).	Alluvium from Piedmont Upland.	1733	0 to 9	Ap	86	27
		1729	18 to 60	C3	96	22
Chewacla silt loam: NW¼SE¼ sec. 31, T. 21 S., R. 12 E. (Grading to Wehadkee).	Alluvium from Piedmont Upland.	1727	0 to 9	Ap	87	28
		1726	21 to 60	C2	108	16
Hulett gravelly fine sandy loam: NE¼SE¼ sec. 4, T. 18 S., R. 12 E. (Weathered schist at 39 inches).	Graphitic mica schist.	1754	2 to 8	A2	112	13
		1761	13 to 24	B2t	98	22
Louisa gravelly sandy loam: SE¼NE¼ sec. 32, T. 18 S., R. 11 E. (Grading to Madison).	Quartz mica schist.	1737	0 to 5	Ap	111	15
		1739	5 to 13	B & C	102	22
		1745	13 to 65	C	106	17
Louisa slaty loam: NE¼NE¼ sec. 24, T. 20 S., R. 10 E. (Phyllite at 24 inches).	Phyllite and mica schist.	1734	2 to 7	A2	100	19
		1747	7 to 24	C	110	16
Louisa stony sandy loam: NE¼SE¼ sec. 1, T. 22 S., R. 10 E. (Ortho).	Mica schist.	1750	3 to 9	A3	100	19
		1746	9 to 24	C	112	15
Madison gravelly clay loam: NW¼NE¼ sec. 26, T. 18 S., R. 11 E. (Severely eroded).	Residuum from mica schist.	1736	0 to 3	Ap	109	15
		1740	3 to 18	B2t	96	25
		1755	23 to 60	C	100	21
Madison gravelly fine sandy loam: NW¼NE¼ sec. 22, T. 19 S., R. 12 E. (Ortho).	Mica schist.	1751	1 to 6	A1	102	18
		1763	10 to 28	B2t	91	30
		1724	38 to 60	C	106	18
Madison gravelly fine sandy loam: SE¼SW¼ sec. 7, T. 22 S., R. 11 E. (Thin B2 horizon).	Residuum from mica schist.	1756	0 to 5	Ap	105	19
		1758	9 to 16	B2t	101	21
		1731	16 to 42	C	104	18
Madison gravelly fine sandy loam: NW¼SE¼ sec. 14, T. 19 S., R. 12 E. (Ortho).	Graphitic mica schist.	1770	0 to 4	A1	92	22
		1728	12 to 34	B2t	94	27
		1769	34 to 44	C	105	18
Madison gravelly fine sandy loam: SW¼SE¼ sec. 33, T. 20 S., R. 12 E. (Thin B horizon).	Graphitic mica schist.	1768	0 to 4	A2	96	21
		1725	8 to 16	B2t	101	20
		1767	16 to 22	C	104	19
Madison gravelly fine sandy loam: NE¼NE¼ sec. 23, T. 18 S., R. 12 E. (Thick B horizon).	Graphitic mica schist.	1766	0 to 5	A1	91	22
		1730	13 to 42	B2t	91	27
		1757	42 to 63	C	98	23
Mantachie fine sandy loam: SW¼NE¼ sec. 3 T. 20 S., R. 11 E. (Grading to Congaree).	Alluvium from Piedmont Upland.	1752	0 to 13	Ap	103	20
		1764	20 to 61	C2	113	13

See footnotes at end of table.

test data

standard procedures of the American Association of State Highway Officials (AASHO) (*2*)]

Mechanical analysis [2]									Classification	
3-in.	Percentage passing sieve—					Percentage smaller than 0.002 mm.	Liquid limit	Plasticity index	AASHO	Unified [3]
	¾-in.	No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm.)	No. 200 (0.074 mm.)					
100	90	80	78	53	22	11	14	[4] NP	A-2-4(0)	SM.
100	93	86	85	68	46	35	37	16	A-6(4)	SC.
100	97	96	93	67	45	35	47	17	A-7-5(5)	SM.
	100	99	96	66	40	31	46	19	A-7-6(4)	SM-SC.
100	97	92	91	86	28	8	NP	NP	A-2-4(0)	SM.
		100	99	97	72	58	56	23	A-7-5(16)	MH.
	100	99	99	98	64	46	44	13	A-7-5(8)	ML.
		100	99	97	59	42	45	14	A-7-5(7)	ML.
100	86	82	80	65	21	10	18	NP	A-2-4(0)	SM.
		100	99	93	81	69	68	32	A-7-5(20)	MH.
		100	99	77	49	38	53	12	A-7-5(4)	SM.
		100	99	98	93	60	48	5	A-5(10)	ML.
		100	99	98	93	42	40	9	A-4(8)	ML.
	100	99	93	89	83	63	49	10	A-5(10)	ML.
	100	99	99	97	68	40	34	9	A-4(7)	ML-CL.
100	97	91	83	76	55	25	22	2	A-4(4)	ML.
	100	97	91	86	74	54	52	21	A-7-5(15)	MH.
100	99	88	76	60	31	18	24	NP	A-2-4(0)	SM.
	100	99	90	87	53	41	50	15	A-7-5(6)	ML.
100	98	92	85	63	29	17	43	4	A-2-5(0)	SM.
100	89	72	59	50	43	29	38	4	A-4(2)	SM.
100	81	60	50	44	39	24	33	8	A-4(1)	GM.
[5] 100	97	78	58	47	25	13	45	3	A-1-b(0)	SM.
100	85	77	63	45	29	10	39	3	A-2-4(0)	SM.
100	82	75	72	64	34	19	27	3	A-2-4(0)	SM.
		100	99	93	68	59	52	17	A-7-5(11)	MH.
			100	93	48	18	41	4	A-5(3)	SM.
100	96	92	83	77	45	26	27	1	A-4(2)	SM.
	100	99	97	94	78	62	55	16	A-7-5(13)	MH.
	100	99	91	78	50	17	48	11	A-7-5(4)	SM.
100	99	95	85	67	43	24	33	2	A-4(2)	SM.
	100	99	95	75	58	45	59	23	A-7-5(12)	MH.
	100	99	94	60	38	22	52	13	A-7-5(2)	SM.
100	99	83	73	64	38	22	35	NP	A-4(1)	SM.
100	99	94	87	83	68	54	47	8	A-5(8)	ML.
100	90	69	64	58	38	17	39	5	A-4(1)	GM-SM.
100	89	64	57	52	33	18	34	1	A-2-4(0)	GM.
	100	95	90	82	60	46	42	14	A-7-6(7)	ML.
100	98	85	76	70	52	30	46	9	A-5(4)	ML.
100	97	93	88	84	61	28	32	1	A-4(5)	ML.
	100	99	98	97	83	65	54	18	A-7-5(14)	MH.
	100	99	99	97	75	23	49	12	A-7-5(11)	ML.
		100	99	98	55	25	28	1	A-4(4)	ML.
		100	99	98	43	20	22	1	A-4(2)	SM.

TABLE 5.—*Engineering*

Soil type and location of sample	Parent material	Alabama report number	Depth from surface	Horizon	Moisture-density data [1]	
					Maximum dry density	Optimum moisture
			In.		*Lb. per cu. ft.*	*Pct.*
Pacolet sandy loam: SE¼NE¼ sec. 5, T. 22 S., R. 13 E. (Shallow—thin B horizon).	Granite, gneiss, and schist.	1735	0 to 5	A1	109	15
		1742	12 to 20	B2t	99	21
		1741	20 to 31	C	94	24
Wedowee gravelly sandy loam: NE¼ SE¼ sec. 26, T. 21 S., R. 13 E. (Shallow—thin B horizon).	Granite, gneiss, and schist.	1749	0 to 5	Ap	122	10
		1744	12 to 25	B2t	111	14
		1762	25 to 38	C	96	23

[1] Based on AASHO Designation: T 99–57, Method A (*2*).

[2] Mechanical analysis according to the AASHO Designation: T 88–57 (*2*). Results by this procedure may differ somewhat from results obtained by the soil survey procedure of the Soil Conservation Service (SCS). In the AASHO procedure, the fine material is analyzed by the hydrometer method, and the various grain-size fractions are calculated on the basis of all the material, including that coarser than 2 millimeters in diameter. In the SCS soil survey procedure, the fine material is analyzed by the pipette method, and the material coarser than 2 millimeters in diameter is excluded from calculations of grain-size fractions. The mechanical analysis data used in this table are not suitable for naming textural classes for soils.

TABLE 6.—*Estimated*

Soil series and map symbols	Depth to bedrock	Depth from surface	Classification		
			USDA texture	Unified	AASHO
	Ft.	*In.*			
Altavista (AaA, AaB, AgB, AgC2)	7 to 15	0 to 6	Fine sandy loam	SM	A–2 or A–4
		6 to 44	Sandy clay loam	ML or CL	A–6
Appling (AlB2, AlC2, ApB2, ApC2)	10+	0 to 6	Sandy loam	SM	A–2 or A–4
		6 to 13	Loam	SM–ML	A–4
		13 to 67	Sandy clay	SC or CL	A–6
		67 to 77	Sandy loam	SM	A–7 or A–4
Augusta (AuA, AuB)	10+	0 to 7	Fine sandy loam	SM	A–4
		7 to 31	Sandy clay	CL	A–6 or A–7
Buncombe (Bu)	10+	0 to 48	Loamy sand or loamy fine sand.	SM	A–2
Cecil (CeB3, CeC3, CeD3, CeE3, CgB2, CgC2, CgD2).	5 to 20	0 to 6	Gravelly sandy loam or gravelly clay loam.	SM or SC	A–2 or A–4
		6 to 62	Clay	ML or MH	A–7
Chewacla (Cn)	5 to 10	0 to 9	Silt loam	ML	A–5 or A–4
		9 to 60	Silt loam or loam	ML or SM	A–4
Congaree silt loam (Co)	10+	0 to 24	Silt loam	ML or SM	A–4
		24 to 56	Sandy loam to silt loam	SM or ML	A–2 or A–4
Davidson (DaB3, DaC3, DaD3, DgB2, DgC2, DgD2, DgE2).	4 to 10	0 to 6	Gravelly sandy loam or clay loam.	SM	A–4
		6 to 40	Clay or clay loam	MH, CH, or CL.	A–7
Hulett (HuB2, HuC, HuC2)	4 to 8	0 to 13	Gravelly fine sandy loam	SM or ML	A–2 or A–4
		13 to 39	Clay	MH	A–7

test data—Continued

Mechanical analysis [2]							Liquid limit	Plasticity index	Classification	
3-in.	Percentage passing sieve—					Percentage smaller than 0.002 mm.			AASHO	Unified [3]
	¾-in.	No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm.)	No. 200 (0.074 mm.)					
100	98	98	93	59	26	12	30	NP	A–2–4(0)	SM.
	100	99	98	79	61	49	49	18	A–7–5(10)	ML.
	100	97	95	74	58	49	64	20	A–7–5(11)	MH.
100	93	88	84	54	25	11	15	NP	A–2–4(0)	SM.
	100	99	95	66	48	35	40	19	A–6(6)	SC.
		100	99	75	56	46	56	23	A–7–5(11)	MH.

[3] SCS and BPR have agreed to consider that all soils having plasticity indexes within 2 points of the A-line are to be given a borderline classification. Examples of borderline classification obtained by this use are SM–SC, ML–CL, and GM–SM.
[4] Nonplastic.
[5] Based on sample as received in laboratory. Data not corrected for amount discarded in field sampling.

properties

Percentage passing sieve—			Permeability	Available water capacity	Reaction	Dispersion	Shrink-swell potential
No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 200 (0.074 mm.)					
			In./hr.	*In./in. of soil*	*pH*		
70 to 100	80 to 100	30 to 50	2 to 6. 3	0. 08 to 0. 16	4. 5 to 5. 5	High	Low.
70 to 100	80 to 100	55 to 75	0. 63 to 2	0. 08 to 0. 16	4. 5 to 5. 5	Moderate	Low.
75 to 100	70 to 100	25 to 50	2 to 6. 3	0. 08 to 0. 16	4. 5 to 5. 5	High	Low.
90 to 100	85 to 100	40 to 55	0. 63 to 2	0. 08 to 0. 16	4. 5 to 5. 5	Moderate	Low.
85 to 100	80 to 100	40 to 60	0. 63 to 2	0. 08 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
75 to 100	80 to 100	40 to 60	0. 2 to 0. 63	0. 08 to 0. 12	4. 5 to 5. 5	High	Moderate to low.
90 to 100	85 to 100	40 to 50	2 to 6. 3	0. 08 to 0. 12	4. 5 to 5	High	Low.
90 to 100	85 to 100	50 to 65	0. 2 to 0. 63	0. 08 to 0. 12	4. 5 to 5	Moderate	Moderate.
95 to 100	95 to 100	20 to 35	>6. 3	0. 04 to 0. 08	4. 5 to 5. 5	High	Low.
80 to 100	70 to 95	20 to 40	2 to 6. 3	0. 08 to 0. 14	4. 5 to 5. 5	High	Low.
90 to 100	95 to 100	50 to 80	0. 63 to 2	0. 08 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
95 to 100	95 to 100	55 to 95	0. 63 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Low.
95 to 100	95 to 100	45 to 95	0. 63 to 2	0. 14 to 0. 16	4. 5 to 5. 5	Moderate	Low.
95 to 100	95 to 100	45 to 90	0. 63 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Low to moderate.
95 to 100	95 to 100	20 to 60	2 to 6. 3	0. 08 to 0. 16	4. 5 to 5. 5	High	Low.
75 to 90	70 to 90	35 to 45	2 to 6. 3	0. 08 to 0. 10	4. 5 to 5. 5	High	Low.
95 to 100	90 to 100	60 to 70	0. 2 to 0. 63	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Moderate to high.
75 to 95	70 to 85	30 to 55	2 to 6. 3	0. 08 to 0. 14	4. 5 to 5. 5	High	Low.
95 to 100	95 to 100	55 to 85	0. 63 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.

TABLE 6.—*Estimated*

Soil series and map symbols	Depth to bedrock	Depth from surface	Classification		
			USDA texture	Unified	AASHO
	Ft.	*In.*			
Louisa (LgC, LgD, LgE, LoD, LoE, LsC2, LsD2, LsE2, LtD, LtE).	4 to 10+	0 to 9	Gravelly sandy loam	SM	A–1, A–2, or A–4.
		9 to 24	Loam or sandy loam	SM, CM, or CL.	A–2, A–4, or A–7.
		24	Mica schist		
Louisburg (LuC2, LuD2)	2 to 4	0 to 16	Stony sandy loam	SM	A–2 or A–4
		16 to 36	Sandy clay loam	SM or MH	A–4 or A–7
Madison (MaB3, MaC3, MaD3, MaE3, MdB2, MdC2, MdD2, MdE2).	5 to 10	0 to 6	Gravelly fine sandy loam	SM	A–2 or A–4
		6 to 38	Clay	MH	A–7
		38 to 60	Sandy loam or clay loam	SM	A–5 or A–7
Mantachie (Mt, Wk)	5 to 10	0 to 12	Fine sandy loam	ML	A–5 or A–4
For interpretations for Wehadkee part of Wk, see Wehadkee series.		12 to 42	Sandy loam	ML or SM	A–4
Ochlockonee (Oc, Ok)	10+	0 to 8	Fine sandy loam	ML or SM	A–4
		8 to 40	Sandy loam	SM or ML	A–2 or A–4
Pacolet (PcC3, PsC2, PsD2, PsE2)	2 to 5	0 to 4	Sandy loam	SM	A–2 or A–4
		4 to 24	Clay or sandy clay	ML or MH	A–7
Roanoke (Ra)	10+	0 to 5	Silt loam	ML	A–4
		5 to 45	Sandy clay	MH or CH	A–7
Wedowee (WdC3, WdD3, WdE3, WgC2, WgD2. WgE2).	2 to 4	0 to 5	Gravelly sandy loam	SM or ML	A–2 or A–4
		5 to 25	Sandy clay	SC or CL	A–7
		25 to 36	Sandy clay or sandy clay loam.	SC or CL	A–7 or A–4
Wehadkee (Wh, Wk)	10+	0 to 15	Fine sandy loam	SM	A–4 or A–2
For interpretations of Mantachie part of Wk, see Mantachie series.		15 to 40	Sandy clay loam	CL or MH	A–6 or A–7
Wickham (WmB2, WmC2, WmD2, WnC2, WnD2).	10 to 15	0 to 10	Fine sandy loam	SM	A–2 or A–4
		10 to 26	Sandy clay loam	CL	A–6
		26 to 60	Clay loam or sandy clay	CL or MH	A–6 or A–7
Wilkes (WsC2, WtD2)	1 to 3	0 to 7	Sandy loam	SM	A–4 or A–2
		7 to 12	Loam to clay	CL or CH	A–6 or A–7
		12	Bedrock		

properties—Continued

Percentage passing sieve—			Permeability	Available water capacity	Reaction	Dispersion	Shrink-swell potential
No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 200 (0.074 mm.)					
			In./hr.	*In./in. of soil*	*pH*		
70 to 90	55 to 75	25 to 45	2 to 6. 3	0. 08 to 0. 12	4. 5 to 5. 5	High	Low.
60 to 100	50 to 90	20 to 55	2 to 6. 3	0. 1 to . 15	4. 5 to 5. 5	Moderate to high.	Low.
70 to 90	65 to 75	30 to 40	2 to 6. 3	0. 08 to 0. 12	4. 5 to 5. 5	High	Low.
80 to 90	75 to 85	40 to 60	2 to 6. 3	0. 08 to 0. 12	4. 5 to 5. 5	High	Low.
75 to 95	70 to 85	30 to 45	2 to 6. 3	0. 08 to 0. 14	4. 5 to 5. 5	High	Low.
95 to 100	95 to 100	55 to 80	0. 63 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
95 to 100	90 to 100	35 to 50	2 to 6. 3	0. 08 to 0. 12	4. 5 to 5. 5	High	Low.
95 to 100	95 to 100	55 to 95	0. 63 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Low.
95 to 100	95 to 100	45 to 95	0. 63 to 2	0. 14 to 0. 16	4. 5 to 5. 5	Moderate	Low.
95 to 100	95 to 100	45 to 90	0. 63 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Low to moderate.
95 to 100	95 to 100	20 to 60	2 to 6. 3	0. 08 to 0. 16	4. 5 to 5. 5	High	Low.
80 to 100	70 to 95	20 to 40	2 to 6. 3	0. 08 to 0. 14	4. 5 to 5. 5	High	Low.
90 to 100	95 to 100	50 to 80	0. 63 to 2	0. 08 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
95 to 100	85 to 100	55 to 75	0. 2 to 0. 63	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
90 to 100	90 to 100	50 to 75	0. 2 to 0. 63	0. 12 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
20 to 60	75 to 90	20 to 60	2 to 6. 3	0. 08 to 0. 12	4. 5 to 5. 5	High	Low.
40 to 75	85 to 95	40 to 75	0. 63 to 2	0. 08 to 0. 12	4. 5 to 5. 5	Moderate	Moderate.
40 to 75	85 to 95	40 to 75	0. 63 to 2	0. 08 to 0. 12	4. 5 to 5. 5	Moderate	Moderate to low.
95 to 100	95 to 100	30 to 50	0. 63 to 2	0. 08 to 0. 16	4. 5 to 5. 5	Moderate	Low.
95 to 100	90 to 100	50 to 70	0. 2 to 0. 63	0. 10 to 0. 14	4. 5 to 5. 5	Moderate	Moderate.
75 to 100	70 to 85	30 to 50	2 to 6. 3	0. 10 to 0. 14	4. 5 to 5. 5	High	Low.
90 to 100	80 to 90	55 to 75	0. 63 to 2	0. 10 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
90 to 100	80 to 95	55 to 75	0. 63 to 2	0. 10 to 0. 16	4. 5 to 5. 5	Moderate	Moderate.
90 to 100	70 to 90	30 to 50	0. 63 to 2	0. 08 to 0. 14	4. 5 to 5. 5	Moderate	Moderate.
90 to 100	85 to 100	50 to 70	0. 2 to 2	0. 12 to 0. 16	4. 5 to 5. 5	Moderate to low.	Moderate to high.

TABLE 7.—*Interpretation of*

Soil series and map symbols	Suitability as source of—				Soil features affecting—	
	Topsoil	Sand	Gravel	Road fill	Highways	Farm ponds: Reservoir area
Altavista (AaA, AaB, AgB, AgC2).	Uppermost 6 inches good; subsoil poor.	Unsuitable	Fair; good at depth of 40 to 50 inches in places.	Good: workability good.	Gentle slopes; good drainage; depth to bedrock, 7 to 15 feet or more.	Moderate seepage; strata of sand and gravel at depth of 36 to 48 inches in places.
Appling (AlB2, AlC2, ApB2, ApC2).	Uppermost 8 inches fair; subsoil poor.	Unsuitable	Unsuitable	Good: topsoil is used for surfacing newly graded roads.	Depth to bedrock, 10 feet or more.	Moderate seepage.
Augusta (AuA, AuB)	Topsoil fair; subsoil poor.	Unsuitable	Unsuitable	Fair	High water table in wet seasons.	Slow seepage
Buncombe (Bu)	Poor: poorly graded sand.	Good	Unsuitable	Good	Subject to flooding.	Rapid seepage
Cecil (CeB3, CeC3, CeD3, CeE3, CgB2, CgC2, CgD2).	Uppermost 10 inches good.	Unsuitable	Unsuitable	Fair: high clay content.	Depth to bedrock, 5 to 20 feet or more.	Moderate seepage.
Chewacla (Cn)	Good: seasonal high water table.	Unsuitable	Unsuitable	Fair: poor workability.	High water table; flooding.	Moderate seepage.
Congaree (Co)	Good: one of the best sources of topsoil in the county.	Unsuitable	Unsuitable	Fair: flooding and overflow.	Flooding	Moderate to rapid seepage.
Davidson (DaB3, DaC3, DaD3, DgB2, DgC2, DgD2, DgE2).	Fair: thin surface layer.	Unsuitable	Unsuitable	Fair: compaction difficult because of high clay content or plasticity.	Slope and depth to rock.	Moderate to slow seepage.
Hulett (HuB2, HuC, HuC2).	Uppermost 12 inches good.	Unsuitable	Unsuitable	Fair: high clay content.	Depth to bedrock, 6 to 8 feet.	Moderate seepage.
Louisa (LgC, LgD, LgE, LoD, LoE, LsC2, LsD2, LsE2, LtD, LtE).	Poor: stones	Unsuitable	Unsuitable	Fair: shallow	Slope and depth to rock.	Rapid seepage through fissures in rock.
Louisburg (LuC2, LuD2)	Poor: stones	Unsuitable	Unsuitable	Good	Slope and depth to rock.	Possible seepage.
Madison (MaB3, MaC3, MaD3, MaE3, MdB2, MdC2, MdD2, MdE2).	Uppermost 6 inches good.	Unsuitable	Unsuitable	Fair: high clay content; deformed when wet.	Slope and depth to rock.	Moderate seepage.

engineering properties of soils

Soil features affecting—Continued					
Farm ponds—Con. Embankment	Agricultural drainage	Irrigation	Terraces and diversions	Waterways	Septic tank field lines
Moderate to high strength and stability.	Not needed	Moderate intake; moderately high water-holding capacity.	Deep; no limitations.	Vegetation difficult to establish if topsoil is removed.	Moderate seepage.
High strength and stability; no limitations.	Not needed	Slope; rapid intake; moderately high water-holding capacity.	Deep; easily terraced on smoother slopes; some areas steep.	Vegetation difficult to establish if topsoil is removed.	Moderate seepage.
Moderate strength and stability at optimum moisture.	Slow permeability; subsurface drainage needed.	Slow to moderate intake; moderate water-holding capacity.	Not needed	Vegetation difficult to establish if topsoil is removed.	High water table; slow seepage.
Suitable if enough fines; low strength and stability.	Not needed	Rapid intake; low water-holding capacity.	Not needed	Not needed	Subject to overflow.
High strength and stability.	Not needed	Moderately high water-holding capacity.	Erodible on steep slopes; no limitations on smooth slopes.	Highly erodible	Moderate seepage.
High strength and stability at optimum moisture.	Seasonal high water table; subsurface drainage needed.	Moderate intake; moderate water-holding capacity.	Not needed	Not needed	Seasonal high water table; frequent flooding.
Good workability; high strength and stability.	Not needed	Moderate intake; moderate water-holding capacity.	Not needed	Not needed	Flooding.
Moderate strength and stability at proper moisture.	Not needed	Moderate intake; moderately high water-holding capacity.	Moderately erodible	Erodible on steep slopes; difficult to establish vegetation if topsoil is removed.	Moderate to slow seepage.
Good workability	Not needed	Moderate intake; moderately high water-holding capacity.	Erodible on steep slopes; easily terraced on smooth slopes.	Highly erodible; vegetation difficult to establish if topsoil is removed.	Moderate seepage.
Slight seepage	Not needed	Steep; low water-holding capacity; poor agricultural soil.	Shallow; steep	Shallow; steep	Shallow; steep; moderately rapid permeability.
Shallow	Not needed	Low water-holding capacity; poor agricultural soil.	Shallow; steep	Shallow; steep	Shallow; steep.
Good workability	Not needed	Moderate intake; moderately high water-holding capacity.	Sloping; erodible	Highly erodible on steep slopes; vegetation difficult to establish if topsoil has been removed.	Moderate seepage.

TABLE 7.—*Interpretation of*

Soil series and map symbols	Suitability as source of—				Soil features affecting—	
	Topsoil	Sand	Gravel	Road fill	Highways	Farm ponds: Reservoir area
Mantachie (Mt, Wk)—For interpretations for Wehadkee part of Wk, see Wehadkee series.	Good: seasonal high water table.	Unsuitable	Unsuitable	Fair: poor workability.	Seasonal high water table; flooding.	Moderate seepage.
Ochlockonee (Oc, Ok)	Good: one of the best sources of topsoil in the county.	Unsuitable	Unsuitable	Fair: flooding	Flooding	Moderate to rapid seepage.
Pacolet (PcC3, PsC2, PsD2, PsE2).	Uppermost 5 inches good.	Unsuitable	Unsuitable	Fair: high clay content.	Depth to bedrock, 5 feet; erodible; unstable, highly weathered material from a depth of 2 feet to bedrock.	Moderate seepage.
Roanoke (Ra)	Poor: high water table.	Unsuitable	Unsuitable	Fair to poor: heavy clay subsoil; plastic.	High water table; flooding.	Slow seepage
Wedowee (WdC3, WdD3, WdE3, WgC2, WgD2, WgE2).	Uppermost 6 inches fair; subsoil poor.	Unsuitable	Unsuitable	Good: topsoil used for surfacing newly graded roads.	Depth to bedrock, 4 to 6 feet; erodible, unstable, highly weathered material from a depth of 2 feet to bedrock.	Moderate seepage.
Wehadkee (Wh, Wk)—For interpretations for Mantachie part of Wk, see Mantachie series.	Fair: limited accessibility; high water table.	Unsuitable	Unsuitable	Fair: compaction difficult.	High water table; flooding.	Slow seepage; high water table.
Wickham (WmB2, WmC2, WmD2, WnC2, WnD2).	Uppermost 6 inches good.	Unsuitable	Underlain by layers of gravel at depth of 2 to 6 feet in places.	Good workability; high strength and stability.	Deep; good drainage.	Moderate to rapid seepage.
Wilkes (WsC2, WtD2)	Poor: stony, variable material.	Unsuitable	Unsuitable	Poor: variable material; compaction difficult.	Shallowness and slope.	Slow seepage

engineering properties of soils—Continued

Soil features affecting—Continued					
Farm ponds—Con. Embankment	Agricultural drainage	Irrigation	Terraces and diversions	Waterways	Septic tank field lines
High strength and stability at optimum moisture.	Seasonal high water table; subsurface drainage needed.	Moderate intake; moderate water-holding capacity.	Not needed	Not needed	Seasonal high water table; frequent flooding.
Good workability; high strength and stability.	Not needed	Moderate intake; moderate water-holding capacity.	Not needed	Not needed	Flooding.
High strength and stability; erodible; unstable, highly weathered underlying material.	Not needed	Rapid intake; moderately high water-holding capacity.	Erodible on steep slopes; easily terraced on smooth slopes.	Highly erodible; vegetation difficult to establish if topsoil is removed.	Moderate seepage.
Low strength and stability; sticky and plastic; high shrink-swell.	Slow permeability; high water table.	Poor agricultural soil.	Not needed	Not needed	Slow permeability; high water table.
High strength and stability; no limitations; erodible, unstable, highly weathered underlying material.	Not needed	Rapid intake; moderately high water-holding capacity.	Moderately deep; easily terraced on smooth slopes.	Vegetation difficult to establish if topsoil is removed.	Moderate seepage.
Variable material; low strength and stability; high water content.	Frequent flooding; subsurface drainage needed.	Slow permeability in subsoil.	Not needed	Not needed	High water table; frequent flooding.
High strength and stability; little seepage.	Not needed	Moderate intake; moderately high water-holding capacity; good agricultural soil.	Steep in places	Vegetation difficult to establish if topsoil is removed.	Moderate to rapid seepage.
Variable material; thin soil layers.	Not needed	Shallow; poor agricultural soil.	Shallow; stony	Shallow; stony	Shallow.

Figure 15.—**Profile of Wickham gravelly fine sandy loam, 6 to 10 percent slopes, eroded. The underlying gravel is good material for road base.**

The factors of soil formation are so closely related in their effects on the soils that few generalizations can be made regarding the effects of any one factor alone. This interrelationship is so complex that many of the processes of soil development are unknown.

Parent material

Parent material is the unconsolidated mass from which a soil develops. It is largely responsible for the chemical and mineralogical composition of soils. The parent material of most of the soils in Randolph County is residual; that is, the soils have formed through the weathering of the parent rock in place. The kinds of rock from which the parent material of each soil was derived are listed in table 9, p. 51.

Soils that formed from residual material are generally related to particular rock formations (fig. 16). Madison, Louisa, and Hulett soils were commonly derived from schist; Appling, Cecil, Wedowee, Pacolet, and Louisburg soils from granite and gneiss; and Davidson and Wilkes soils from mixed acidic and basic rocks, such as hornblende gneiss and chloritic schist.

Some characteristics of the parent rock are reflected in the soils that formed from transported material. Congaree, Chewacla, and Wehadkee soils consist entirely of material washed from soils on uplands and have some characteristics of those soils. The soils that formed on bottom lands from micaceous material washed from uplands commonly have mica flakes in their profile. The soils on first bottoms show little profile development and are still receiving deposits. In contrast, the soils on old, high terraces have been in place long enough for distinct horizons to have developed.

Climate

Climate affects the soils physically, chemically, and biologically, primarily through the influence of precipitation and temperature. Water dissolves minerals, supports biological activity, and transports mineral and organic residues through the soil profile. The amount of water that percolates through the soil at a given point depends on rainfall, relative humidity, length of the frost-free period, permeability, and physiographic position. Temperature influences the kinds and growth of organisms and the speed of physical and chemical reactions in the soil.

The climate of Randolph County is warm, humid, temperate, and continental. The rainfall is well distributed throughout the year. The average distribution by months is indicated in table 11, p. 61. In this kind of climate, the soils are moist much of the time.

Because the climate is nearly uniform throughout the county, it has caused few differences among the soils. As can be expected in a climate of this type, most of the soils are highly weathered, leached, strongly acid, and low in fertility.

Living organisms

Higher plants, micro-organisms, earthworms, and other living organisms contribute to the formation of soils. The natural vegetation on the well-drained, well-developed soils in this county consisted dominantly of deciduous hardwoods, chiefly oak, chestnut, and hickory intermixed with some pine. The original vegetation on the poorly drained and weakly developed soils consisted of bay, willow, gum, alder, and wetland oak. The leaves of deciduous trees generally contain a larger amount of bases and phosphorus than those of coniferous trees and consequently return a larger amount of bases and phosphorus to the soil. The trees that commonly grow in this area have deep or moderately deep roots and consequently transfer large amounts of plant nutrients from the lower part of the soil to the upper part. In this way they retard some of the depleting action of percolating water.

Twigs, roots, and dead leaves and plants are an important source of organic matter. Most of this material is added to the upper part of the soil, where it is acted upon by micro-organisms, earthworms, and other forms of life, and also by direct chemical reaction. The rate of decomposition is fairly rapid. A larger amount of organic material accumulates in cool regions than in warm regions, even under the same drainage conditions.

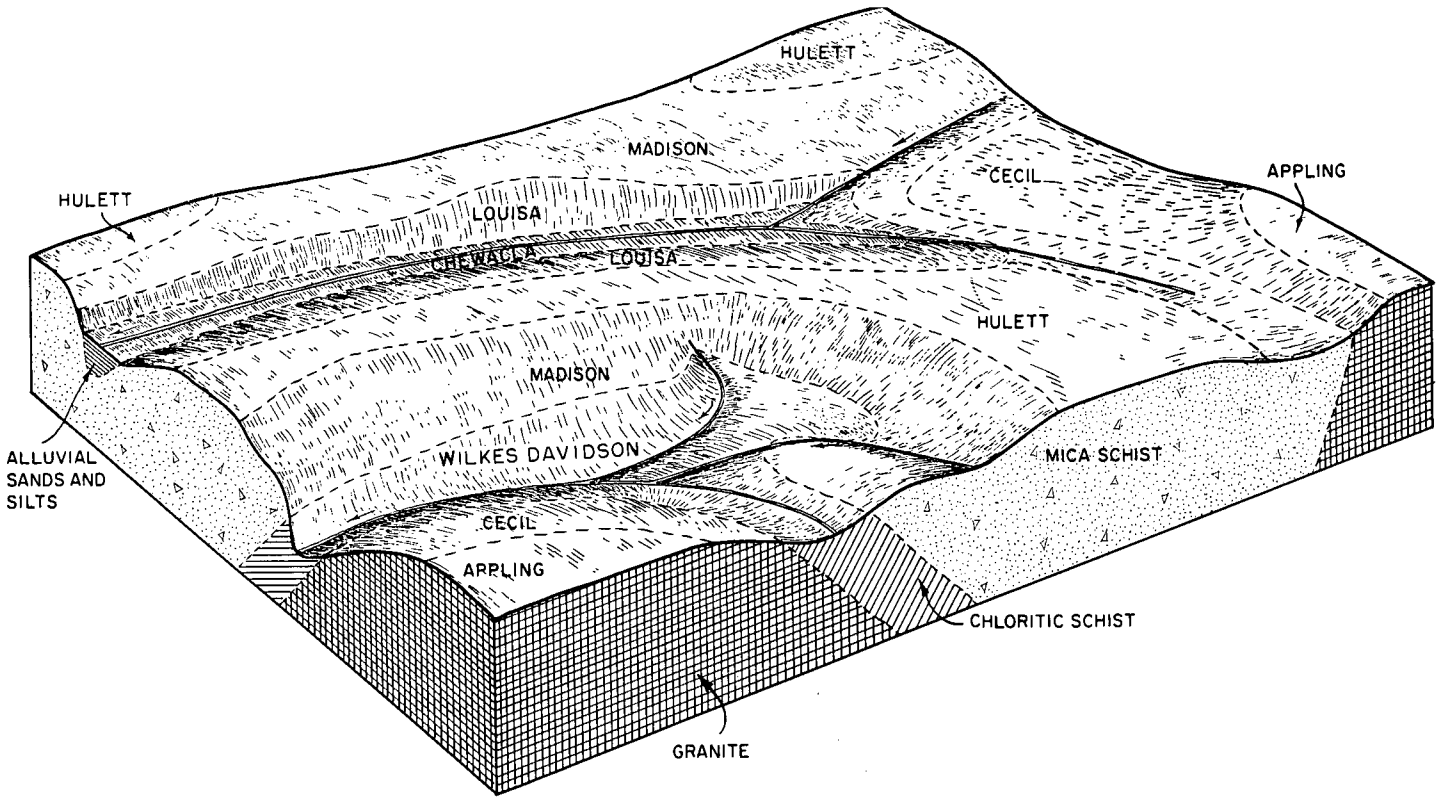

***Figure 16.*—Representative pattern of soils and parent material.**

Relief

Relief, or lay of the land, depends largely on the kind of rock formations underlying the soils, on the geologic history of the area, and on the effects of dissection by streams. Relief influences soil formation through its effects on internal drainage, runoff, moisture relations, erosion, temperature, and plant cover. Soils on steep slopes are likely to be immature because geologic erosion removes the soil almost as fast as it accumulates. As a result, soils that have slopes of more than 15 percent—for example, soils of the Louisa and Louisburg series—have a thin solum.

Time

Generally, the longer the soil has remained in place, the more fully developed the soil profile will be, but because of differences in parent material, relief, and climate, some soils mature more slowly than others. A mature soil is one that has easily recognized A and B horizons. Generally a soil develops in less time in a humid, warm area where vegetation is rank than in a dry or cold area where vegetation is scant. Also, the time required is less if the parent material is coarse textured than if it is fine textured, other factors being equal. Soils on nearly level uplands and on old stream terraces have developed to maturity, but soils of the same age on strong slopes have had little chance to develop, because geologic erosion has removed the soil material so rapidly that the solum remains shallow. On first bottoms and in the areas of local alluvium, soil material has been in place too short a time to allow distinct horizons to develop.

Classification of the Soils

A soil classification system is based on facts about and significant characteristics of soils, including their interrelationships, their behavior, and their response to management. The defined kinds of soils are placed in narrow classes for use in detailed soil surveys and for the application of knowledge within farms and fields. The many thousands of narrow classes are then grouped into progressively fewer and broader classes in successively higher categories so that information can be applied to large geographic areas.

Two systems of classifying soils have been used in the United States in recent years. The older system was adopted in 1938 (*3*) and revised later. The system currently used was adopted for general use by the National Cooperative Soil Survey in 1965. The current system is under continual study. Therefore, readers interested in the developments of the system should search for the latest literature available (*5*).

There are six categories in the current system. The classification is based on observable or measurable properties that are selected mainly to group soils of similar genesis. Beginning with the most inclusive, these categories are the order, the suborder, the great group, the subgroup, the family, and the series.

There are ten orders. Except for Entisols and Histosols, which occur in many different kinds of climate, the order is a broad climatic grouping of soils. Three orders are represented in Randolph County—Entisols, Inceptisols, and Ultisols. Entisols have weakly expressed subsurface horizons. They include many of the alluvial

soils and the weakly developed sandy soils. Inceptisols are young in development, are intensely gleyed, and lack significant illuviation or extreme weathering. They are generally moist. Ultisols have argillic horizons and contain only a small amount of unweathered minerals. The base saturation in Ultisols is less than 35 percent and decreases with increasing depth.

Each order is subdivided into suborders, mainly on the basis of soil characteristics that seem to produce classes having the greatest genetic similarity. The suborders have a narrower climatic range than the order. The criteria for suborders reflect either the presence or the absence of waterlogging or soil differences resulting from the climate or vegetation.

The great groups are based on kinds and sequence of major horizons and on soil features. The horizons considered are those that have accumulations of clay, iron, or humus and those that have pans that interfere with root development and water movement. The soil features considered are the self-mulching properties of clays, soil temperature, and chemical composition, mainly the amount of calcium, magnesium, sodium, and potassium.

The subgroups are subdivisions of the great groups. One subgroup within each great group represents the central (typic) concept of the group, and the others represent the intergrades, that is, the soils that have mostly the properties of one great soil group but also have one or more properties of another great group, suborder, or order.

The families are separations within a subgroup. The separations are based mainly on properties important to the growth of plants or to engineering uses. These properties include texture, mineralogy, reaction, soil temperature, permeability, thickness of horizons, and consistence.

The section "How This Soil Survey Was Made" describes how soils are classified according to series.

Table 8 shows how the soils in Randolph County are classified according to series, family, subgroup, and order in accordance with the current system of classification.

The 1938 system also has six categories, but only four have been widely used. From the broadest to the narrowest, these four categories are the order, the great soil group, the series, and the type.

There are three orders—zonal, intrazonal, and azonal. Each of these orders consists of a number of great soil groups. Each great soil group is made up of many soil series, and a series may include two or more types. The section "How This Soil Survey Was Made" describes the series and the type.

New soil series must be established and concepts of some established series, especially older ones that have been used little in recent years, must be revised in the course of the soil survey program across the country. A proposed new series has tentative status until review of the series concept at State, regional, and national levels of responsibility for soil classification result in a judgment that the new series should be established. Most of the soil series described in this publication were established before this survey was made. Two of the series represented in the county, however, are tentative at present. These are the Pacolet and Wedowee series.

The classification of the soil series in Randolph County according to the 1938 system is discussed in the following pages and is shown in table 9. Table 9 also gives, for each series, a brief profile description, the topographic position, the drainage class, the slope range, the parent material, and the degree of profile development.

Zonal soils

Zonal soils have well-developed profile characteristics that reflect the influence of the active factors of soil formation, chiefly climate and vegetation. The zonal order is represented in Randolph County by the Red-Yellow Podzolic and Reddish-Brown Lateritic great soil groups.

RED-YELLOW PODZOLIC SOILS

The Red-Yellow Podzolic great soil group consists of well-developed, well-drained, acid soils that formed under forest vegetation in a warm-temperate, humid climate. These soils have a thin organic horizon and an organic-mineral A1 horizon. The A1 horizon is underlain by a lighter colored, bleached A2 horizon that overlies a red, yellowish-red, or yellow, clayey B2t horizon. The parent materials are all more or less siliceous. Coarse, reticulate

TABLE 8.—*Soil series classified according to the current system of classification*

Series	Family	Subgroup	Order
Altavista	Fine loamy, siliceous, thermic	Typic Hapludults	Ultisols.
Appling	Clayey, kaolinitic, thermic	Typic Hapludults	Ultisols.
Augusta	Fine loamy, mixed, thermic	Aeric Ochraquults	Ultisols.
Buncombe	Sandy, siliceous, acid, thermic	Typic Udifluvents	Entisols.
Cecil	Clayey, kaolinitic, thermic	Typic Hapludults	Ultisols.
Chewacla	Fine loamy, mixed, thermic	Aquic Fluventic Dystrochrepts	Inceptisols.
Congaree	Fine loamy, mixed, thermic	Fluventic Dystrochrepts	Inceptisols.
Davidson	Clayey, kaolinitic, thermic	Typic Rhodudults	Ultisols.
Hulett	Clayey, kaolinitic, thermic	Typic Hapludults	Ultisols.
Louisa	Coarse loamy, micaceous, thermic, shallow	Ruptic-Ultic Dystrochrepts	Inceptisols.
Louisburg	Coarse loamy, siliceous, thermic	Typic Dystrochrepts	Inceptisols.
Madison	Fine loamy, kaolinitic, thermic	Typic Hapludults	Ultisols.
Mantachie	Coarse silty, siliceous, acid, thermic	Aeric Fluventic Haplaquepts	Inceptisols.
Ochlockonee	Coarse loamy, siliceous, acid, thermic	Typic Udifluvents	Entisols.
Pacolet	Clayey, kaolinitic, thermic	Typic Hapludults	Ultisols.
Roanoke	Clayey, mixed, thermic	Typic Ochraquults	Ultisols.
Wedowee	Fine loamy, kaolinitic, thermic	Typic Hapludults	Ultisols.
Wehadkee	Fine loamy, mixed, acid, thermic	Fluventic Haplaquepts	Inceptisols.
Wickham	Fine loamy, siliceous, thermic	Typic Paleudults	Ultisols.
Wilkes	Fine loamy, mixed, thermic, shallow	Ruptic-Alfic Dystrochrepts	Inceptisols.

TABLE 9.—*Classification of the soil series in higher categories and important factors that have contributed to the formation of the soils*

ZONAL ORDER

Great soil group and soil series	Brief description [1]	Position	Drainage	Slope range	Parent material	Degree of profile development [2]
Red-Yellow Podzolic group:				*Pct.*		
Altavista series	Dark yellowish-brown to grayish-brown, very friable fine sandy loam over yellowish-brown, friable sandy clay loam.	Stream terraces.	Moderately good.	0 to 10	Old alluvium from Piedmont Upland.	Medium.
Appling series	Dark grayish-brown, very friable sandy loam over yellowish-brown to yellowish-red sandy clay.	Uplands	Good	2 to 10	Residuum weathered from granite and gneiss.	Strong.
Augusta series	Grayish-brown to olive-gray, very friable fine sandy loam over mottled light brownish-gray, friable to firm fine sandy clay.	Stream terraces.	Somewhat poor.	0 to 6	Old alluvium from Piedmont Upland.	Medium.
Cecil series	Brown to dark-brown, very friable fine sandy loam over red, friable to firm clay.	Uplands	Good	2 to 25	Residuum weathered from granite, gneiss, and schist.	Strong.
Hulett series	Grayish-brown to light yellowish-brown, very friable gravelly fine sandy loam over yellowish-brown, friable clay.	Uplands	Good	2 to 10	Residuum weathered from graphitic mica schist.	Strong.
Madison series	Very dark grayish-brown to dark-brown, very friable fine sandy loam over red, friable to firm clay.	Uplands	Good	2 to 25	Residuum weathered from mica schist.	Strong.
Pacolet series	Dark yellowish-brown to dark-brown, very friable sandy loam over red, friable to firm clay.	Uplands	Good	6 to 25	Residuum weathered from granite, gneiss, and schist.	Strong.
Wedowee series	Dark-brown, very friable gravelly sandy loam over yellowish-red to yellowish-brown, friable sandy clay.	Uplands	Good	6 to 25	Residuum weathered from granite and gneiss.	Strong.
Wickham series	Brown, very friable fine sandy loam over yellowish-red, friable sandy clay loam to sandy clay.	Stream terraces.	Good	2 to 15	Old alluvium from Piedmont Upland.	Strong.

See footnotes at end of table.

TABLE 9.—*Classification of the soil series in higher categories and important factors that have contributed to the formation of the soils*—Continued

ZONAL ORDER—Continued

Great soil group and soil series	Brief description [1]	Position	Drainage	Slope range	Parent material	Degree of profile development [2]
				Pct.		
Reddish-Brown Lateritic group:						
Davidson series	Dark reddish-brown, very friable sandy loam over dark-red to red, firm to friable clay.	Uplands	Good	2 to 25	Residuum weathered from mixed acidic and basic rock.	Strong.
INTRAZONAL ORDER						
Low-Humic Gley group:						
Roanoke series	Dark grayish-brown, very friable silt loam over mottled gray sandy clay loam.	Stream terraces.	Poor	0 to 2	Old alluvium from Piedmont Upland.	Medium.
Wehadkee series	Dark grayish-brown, very friable fine sandy loam over mottled olive-gray and white to pale-yellow fine sandy loam to sandy clay loam.	First bottoms	Poor	0 to 2	Recent general alluvium.	Weak.
AZONAL ORDER						
Alluvial group:						
Buncombe series	Dark-brown, loose loamy fine sand over yellowish-brown, loose loamy fine sand.	First bottoms	Excessive	0 to 6	Alluvium from Piedmont Upland.	Weak.
Chewacla series	Brown, very friable fine sandy loam to silt loam over yellowish-brown, very friable fine sandy loam.	First bottoms	Moderately good to somewhat poor.	0 to 2	Alluvium from Piedmont Upland.	Weak.
Congaree series	Dark-brown, friable silt loam to fine sandy loam over yellowish-brown to dark-brown, friable silt loam to sandy loam.	First bottoms	Good	0 to 2	Alluvium from Piedmont Upland.	Weak.
Mantachie series	Brown, very friable fine sandy loam to silt loam over yellowish-brown, very friable fine sandy loam.	First bottoms	Moderately good to somewhat poor.	0 to 2	Alluvium from Piedmont Upland.	Weak.
Ochlockonee series	Dark-brown, friable silt loam to fine sandy loam over yellowish-brown to dark-brown, friable silt loam to sandy loam.	First bottoms	Good	0 to 2	Alluvium from Piedmont Upland.	Weak.

See footnotes at end of table.

TABLE 9.—*Classification of the soil series in higher categories and important factors that have contributed to the formation of the soils*—Continued

AZONAL ORDER—Continued

Great soil group and soil series	Brief description [1]	Position	Drainage	Slope range	Parent material	Degree of profile development [2]
				Pct.		
Lithosol group:						
Louisa series	Brown to dark-brown, very friable sandy loam over yellowish-brown, friable loam.	Uplands	Good	6 to 40	Residuum weathered from mica schist, graphitic mica schist, quartz, and phyllite.	Weak.
Louisburg series	Very dark grayish-brown, very friable sandy loam over light yellowish-brown, friable sandy clay loam.	Uplands	Good	6 to 25	Residuum weathered from granite, gneiss, and schist.	Weak.
Wilkes series	Brown to dark-brown, very friable sandy loam over brown to dark-brown, friable loam.	Uplands	Good	6 to 15	Residuum weathered from basic rocks and acidic rocks.	Weak.

[1] Profiles not materially affected by accelerated erosion.
[2] Measured by the number of important genetic horizons and by the degree of contrast between the horizons.

streaks or mottles of red, brown, and light gray are characteristic of the deep horizons where the parent material is thick (4).

Kaolinite is the dominant clay mineral in the Red-Yellow Podzolic soils of Randolph County, and in most of these soils the content of gibbsite is high. In most areas the A1 and A2 horizons have been mixed by plowing to form an Ap horizon. In most of the steep unprotected areas, erosion has removed nearly all of the A horizon and has exposed the B horizon. In areas not severely eroded, the surface layer is strongly acid, granular fine sandy loam to sandy clay loam. The B horizon has moderate, medium, subangular blocky structure and has a much higher clay content than the A horizon. Clay films are common in the B2 horizon. The C horizon varies in color. It is more mottled than the A and B horizons and has weaker development.

The soils of this group have a low cation-exchange capacity and a very low percentage of base saturation. The cation-exchange capacity commonly is about 6 milliequivalents per 100 grams of soil, but in places it ranges to as high as 20. The base saturation is 35 percent or less.

A clay mineral analysis of the Madison soil, which makes up one of the largest acreages in the county, was made at Auburn University, Auburn, Ala. The clay content of the A horizon was found to be about 25 percent mica, 25 percent intergradient vermiculite chlorite, 20 percent kaolinite, and 20 percent gibbsite. It also contained a small amount of quartz. The B horizon was about 20 percent mica, 25 percent intergradient vermiculite chlorite, 25 percent kaolinite, and 25 percent gibbsite. Free iron oxides ranged from about 3 percent in the A horizon to 12 percent in the B horizon.

Most of the other Red-Yellow Podzolic soils in Randolph County contain the same minerals as the Madison soil but in different proportions; the Cecil soil, for example, contains more kaolinite but less mica and less gibbsite.

The Red-Yellow Podzolic soils in this county are those of the Altavista, Appling, Augusta, Cecil, Hulett, Madison, Pacolet, Wedowee, and Wickham series.

ALTAVISTA SERIES

The Altavista series consists of deep, moderately well drained, strongly acid or very strongly acid soils on low stream terraces. These soils are yellower throughout the profile than Wickham soils and are not so well drained as those soils. They are better drained and less mottled than Augusta and Roanoke soils.

The Altavista soils in this county formed in sediments washed from the Piedmont Upland.

Following is a profile of Altavista fine sandy loam, 2 to 6 percent slopes, in a moist cultivated area 1.4 miles west of Roanoke Hospital on the south side of Alabama Highway 22, in the NE¼SW¼ sec. 28, T. 21 S., R. 12 E.:

Ap—0 to 6 inches, dark yellowish-brown (10YR 4/4) fine sandy loam; weak, fine, granular structure; very friable; very strongly acid; clear, smooth boundary.

B1t—6 to 12 inches, brown to dark-brown (7.5YR 4/4) sandy clay loam; weak, fine, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.
B2t—12 to 23 inches, yellowish-brown (10YR 5/8) sandy clay loam; moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.
B3—23 to 44 inches, yellowish-brown (10YR 5/8) sandy clay loam mottled with strong brown (7.5YR 5/6) and light brownish gray (2.5Y 6/2); mottles are distinct, common, and medium; weak, medium, subangular blocky structure; friable; very strongly acid.
C—44 inches +, highly mottled, light brownish-gray, yellowish-brown, and red, massive, friable sandy clay.

The color of the surface layer ranges from dark yellowish brown through grayish brown to olive brown. In severely eroded areas this layer is yellowish-brown sandy clay loam. The color of the subsoil ranges from yellowish brown through dark brown to strong brown, and the texture from sandy clay loam to sandy clay. In places these soils are underlain by stratified sand, gravel, or clay at a depth of 30 to 60 inches.

Appling Series

The Appling series consists of moderately deep to deep, well-drained, strongly acid or very strongly acid soils. These soils formed in material weathered mainly from granite and granite gneiss and partly from mica schist. Quartz and quartzite fragments up to 3 inches in diameter occur on the surface and throughout the profile in most of these soils. Appling soils are yellower than Cecil soils and the highly micaceous Madison soils, have a thicker B horizon than Wedowee soils, and are deeper and more strongly developed than the shallow, weakly developed Louisburg and Louisa soils.

Following is a profile of Appling gravelly sandy loam, 2 to 6 percent slopes, eroded, 1 mile west of Rock Mills, 0.2 mile south of Alabama Highway 22, and 20 feet west of a paved road, in the SE¼NE¼ sec. 32, T. 21 S., R.13 E.:

Ap—0 to 6 inches, dark grayish-brown (10YR 4/2) gravelly sandy loam; weak, fine, granular structure; very friable; very strongly acid; abrupt, smooth boundary; 25 percent angular quartz gravel ½ inch to 2 inches in diameter.
B1t—6 to 13 inches, yellowish-brown (10YR 5/6) gravelly loam; weak, fine, subangular blocky structure; very friable; very strongly acid; gradual, smooth boundary; 10 percent angular gravel ½ inch to 2 inches in diameter.
B21t—13 to 26 inches, strong-brown (7.5YR 5/6) sandy clay; weak to moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary; 5 percent angular gravel ½ inch to 2 inches in diameter.
B22t—26 to 41 inches, strong-brown (7.5YR 5/6) sandy clay; common, medium, distinct mottles of yellowish red (5YR 4/8) and brownish yellow (10YR 6/6); weak to moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.
C1—41 to 67 inches, mottled yellowish-red (5YR 4/8) and brownish-yellow (10YR 6/6) sandy clay; massive; firm; very strongly acid; gradual, wavy boundary.
C2—67 to 77 inches +, mottled light-gray (2.5Y 7/2), brownish-yellow (10YR 6/8), and strong-brown (7.5YR 5/8) sandy loam; massive; firm in place; very strongly acid.

The color of the surface layer ranges from dark grayish brown to olive brown, and the texture from gravelly sandy loam to fine sandy loam. The gravel content of most profiles exceeds 20 percent. In nongravelly profiles the surface layer is sandy loam. In severely eroded areas the surface layer is brownish-yellow sandy clay loam. The color of the subsoil ranges from yellowish brown through yellowish red to strong brown, and the texture from loam through sandy clay loam to sandy clay.

Augusta Series

The Augusta series consists of somewhat poorly drained soils on low stream terraces. These soils are intermediate in drainage between Altavista and Roanoke soils. They have a distinct B horizon, which is lacking in Chewacla and Congaree soils, but lack the gleyed B2 horizon that is typical of Roanoke soils.

The Augusta soils in this county formed in old alluvium washed from the Piedmont Upland.

Following is a profile of Augusta fine sandy loam, 0 to 2 percent slopes, in a cultivated area 150 feet south of Dickert railroad crossing, 100 feet east of an old vacant house, and 100 feet south of a dirt road, in the NW¼SW¼ sec. 11, T. 22 S., R. 11 E.:

Ap—0 to 7 inches, grayish-brown (2.5Y 5/2) fine sandy loam; weak, fine, granular structure; very friable; very strongly acid.
B1—7 to 14 inches, light olive-brown (2.5Y 5/4) sandy clay loam; common, medium, distinct mottles of grayish brown (2.5Y 5/2) and yellowish red (5YR 4/6); moderate, medium, subangular blocky structure; friable; very strongly acid; clear, smooth boundary.
B2t—14 to 31 inches, mottled light brownish-gray (2.5Y 6/2), red (2.5YR 5/8), and yellowish-brown (10YR 5/8) sandy clay; moderate, medium, subangular blocky structure; friable to firm; prominent, discontinous, pale-olive (5Y 6/3) clay skins on peds; friable to firm; strongly acid; gradual, smooth boundary.
B3g—31 to 43 inches +, light-gray to gray (10YR 6/1) sandy clay loam; common, medium, distinct mottles of yellowish red (5YR 5/6), strong brown (7.5YR 5/6), and yellowish brown (10YR 5/6); massive; firm; strongly acid.

In wooded areas the surface layer is very dark gray. Iron concretions are common on the surface and throughout the profile in small areas. These soils are gleyed below a depth of 30 inches. The depth to unconsolidated material ranges from 40 to more than 60 inches.

Cecil Series

The Cecil series consists of deep, well-drained, strongly acid or very strongly acid soils. These soils formed in material weathered from granite, gneiss, and schist. They are deeper and less micaceous than Madison soils, are deeper than Davidson soils and have a lighter colored A horizon, are redder than Appling soils, and are deeper than the shallow, poorly drained Louisburg soils.

Following is a profile of Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded, in a cultivated area 0.3 mile northwest of Paran Church, on the east side of a dirt road and 75 feet into a field, in the NE¼NE¼ sec. 11, T. 21 S., R. 13 E.:

Ap—0 to 6 inches, brown to dark-brown (10YR 4/3) gravelly sandy loam; weak, fine, granular structure; very friable; very strongly acid; clear, smooth boundary.
B1t—6 to 10 inches, red (2.5YR 5/8) clay loam; moderate, fine, subangular blocky structure; friable; very strongly acid; gradual, smooth boundary.
B2t—10 to 42 inches, red (2.5YR 4/8) clay; moderate, medium, subangular blocky structure; friable to firm; very strongly acid; gradual, smooth boundary.
B3—42 to 62 inches, red (2.5YR 4/6) clay loam; few, medium distinct mottles; moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, smooth boundary.
C—62 to 77 inches +, red (2.5YR 5/8) clay loam; few, medium, distinct mottles of reddish yellow (5YR 7/8) and yellow (10YR 7/8); very friable; very strongly acid.

The color of the surface layer ranges from brown through dark grayish brown to dark brown. About 25 percent of this layer is angular quartz and quartzite gravel ⅛ inch to 2 inches in diameter. In nongravelly profiles the surface layer is sandy loam. In severely eroded areas it is yellowish-red gravelly sandy clay loam or clay loam. The color of the subsoil ranges from red to dark red, and the texture from clay loam through sandy clay to clay.

Hulett Series

The Hulett series consists of well-drained, moderately deep soils that formed in material weathered from graphitic schist. These soils are micaceous enough in the B horizon to have a slick or greasy feel. They have a finer textured B horizon than Appling soils. They are finer textured and more micaceous throughout the profile than Appling and Wedowee soils but are similar to those soils in color. They generally have a grayer A horizon than Madison soils and are not so red in the B horizon as those soils.

The Hulett soils in this county are mainly on fairly broad ridges in the Piedmont Upland.

Following is a profile of Hulett gravelly fine sandy loam, 6 to 10 percent slopes, in a wooded area 0.4 mile southeast of Cold Ridge Church on the west side of a dirt road, in sec. 2, T. 18, R. 12 E.:

AO—½ inch to 0, partly weathered leaves, pine straw, and twigs.
A1—0 to 2 inches, black (10YR 2/1) gravelly fine sandy loam; weak, fine, granular structure; very friable; strongly acid; clear, smooth boundary.
A2—2 to 8 inches, light yellowish-brown (2.5Y 6/4) fine sandy loam; weak, fine, granular structure; very friable; strongly acid; gradual, smooth boundary.
A3—8 to 13 inches, light olive-brown (2.5Y 5/4) fine sandy loam; weak, fine, granular structure; very friable; strongly acid; gradual, smooth boundary.
B2t—13 to 24 inches, yellowish-brown (10YR 5/4) clay; moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, smooth boundary; abundant fine mica flakes.
B3t—24 to 39 inches, yellowish-brown (10YR 5/6) clay; few, medium, distinct mottles of yellowish red (5YR 4/8); moderate, medium, subangular blocky structure; friable; very strongly acid; abrupt, wavy boundary; abundant fine mica flakes.
R—39 to 42 inches, slightly weathered graphitic schist.

The texture of the surface layer ranges from gravelly fine sandy loam to loam. In uneroded areas this layer is stained with organic matter. The texture of the subsoil ranges from clay to clay loam, and the color from yellowish brown to strong brown. Fine mica flakes are abundant in both the surface layer and the subsoil. The thickness of the solum ranges from 20 to 40 inches.

Madison Series

The Madison series consists of moderately deep, well-drained, strongly acid or very strongly acid soils on uplands. These soils formed in material weathered from mica schist and in similar material that contained a large amount of mica. They have a redder, more micaceous, more clayey B horizon than Appling soils. They are deeper than Louisa soils and are more strongly developed.

Following is a profile of Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded, 1.7 miles southeast of Woodland School, 0.4 mile south of J. B. McManus Store, and 0.2 mile south of a dirt road through a wooded area, in a pit, in the NW¼NE¼ sec. 22, T. 19 S., R. 12 E.:

A1—0 to 1 inch, very dark grayish-brown to dark-brown (10YR 3/2–3/3) gravelly fine sandy loam; weak, fine, granular structure; very friable; very strongly acid; clear, smooth boundary.
A2—1 to 6 inches, dark-brown (5YR 4/4) fine sandy loam; weak, fine, granular structure to weak, fine, subangular blocky; very friable; very strongly acid; clear, smooth boundary.
B1t—6 to 10 inches, yellowish-red (5YR 4/8) clay loam; weak, fine, subangular blocky structure; friable; very strongly acid; clear, wavy boundary.
B2t—10 to 28 inches, red (2.5YR 4/8) clay; moderate, medium, subangular blocky structure; friable to firm; abundant small mica flakes; very strongly acid; clear, wavy boundary.
B3t—28 to 38 inches, red (2.5YR 4/6) clay loam; weak, fine, subangular blocky structure; friable; abundant small mica flakes that increase in size and number with increasing depth; very strongly acid; clear, wavy boundary.
C—38 to 60 inches, partly weathered mica schist.
R—60 inches +, mica schist.

The color of the surface layer ranges from very dark grayish brown through brown and dark brown to dark yellowish brown, and the texture from fine sandy loam through loam to sandy clay loam. The color of the subsoil ranges from red to yellowish red, and the texture from clay loam to clay. This layer is 20 to 40 percent mica. Mica flakes occur throughout the profile. They range from silt to coarse sand in size and are finest in the subsoil. The depth to partly weathered parent material ranges from 26 to 40 inches. The depth to weathered mica schist varies considerably within short distances, and dikes of this material protrude into the upper part of the subsoil in many places. Quartz gravel occurs on the surface, and in most places throughout the profile.

Pacolet Series

The Pacolet series consists of well-drained, strongly acid soils that formed in material weathered from granite, gneiss, and schist. These soils have a shallower, more friable solum than Cecil soils but have slightly less distinct horizons. They have a redder B horizon than Wedowee soils and a redder, more distinct B horizon than the shallow Louisburg soils.

Following is a profile of Pacolet sandy loam, 6 to 10 percent slopes, eroded, in a wooded area ¾ mile south of Almond and 100 yards west of a dirt road, in sec. 5, T. 22 E., R. 10 E.:

Ap—0 to 4 inches, yellowish-brown (10YR 5/4) sandy loam; weak, fine, granular structure; very friable; strongly acid.
B1t—4 to 8 inches, yellowish-red (5YR 5/6) sandy clay loam; weak, fine, subangular blocky structure; friable; strongly acid.
B2t—8 to 18 inches, red (2.5YR 4/6) sandy clay; moderate, medium, subangular blocky structure; friable; strongly acid.
B3—18 to 24 inches, red (2.5YR 5/8) sandy clay loam; weak, fine, subangular blocky structure; numerous fine mica flakes; friable; strongly acid.
C—24 to 36 inches +, red (2.5YR 5/8) highly weathered granite; many large mica flakes.

The color of the surface layer ranges from brown through yellowish brown to dark yellowish brown. The texture of the subsoil ranges from sandy clay loam through sandy clay to clay. The thickness of the solum ranges from 24 to 40 inches. Small mica flakes are common in the lower part of the subsoil. The partly weathered parent material contains many large mica flakes.

Wedowee Series

The Wedowee series consists of well-drained, strongly acid or very strongly acid soils on uplands. These soils formed in material weathered from granite and gneiss. They are not so red as Cecil and Pacolet soils, they have a thinner B horizon than Appling soils, and they are deeper and more strongly developed than Louisburg soils.

Following is a profile of Wedowee gravelly sandy loam, 6 to 10 percent slopes, eroded, 0.2 mile north of Lime Church, on the east side of a paved road, in the NE¼SE¼ sec. 26, T. 21 S., R. 13 E.:

Ap—0 to 5 inches, brown to dark-brown (10YR 4/3) gravelly sandy loam; weak, fine, granular structure; friable; very strongly acid; clear, smooth boundary.

B1t—5 to 12 inches, strong-brown (7.5YR 5/6) sandy clay loam; weak, fine, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.

B2t—12 to 25 inches, yellowish-red (5YR 5/6) sandy clay; moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.

C—25 to 38 inches, yellowish-red (5YR 5/8) sandy clay loam; common, medium, distinct, red (2.5YR 4/8) mottles; massive; firm; very strongly acid; gradual, wavy boundary.

R—38 inches +, multicolored granite.

The color of the surface layer ranges from grayish brown through brown and dark brown to yellowish brown. The color of the B horizon ranges from strong brown through yellowish brown to yellowish red. The thickness of the solum ranges from 20 to 40 inches. In some areas the lower part of the profile contains mica flakes.

Wickham Series

The Wickham series consists of deep, well-drained, strongly acid or very strongly acid soils on high stream terraces. These soils have a redder, more clayey B horizon than Altavista, Augusta, and Roanoke soils and are better drained than those soils.

The Wickham soils in this county formed in old general alluvium washed from the Piedmont Upland.

Following is a profile of Wickham fine sandy loam, 2 to 6 percent slopes, eroded, in a cultivated area 200 yards northeast of Little Tallapoosa River bridge on county highway 82, in a gravel pit 100 yards north of the road, in the NW¼SW¼ sec. 21, T. 18 S., R. 12 E.:

Ap—0 to 10 inches, dark grayish-brown (10YR 4/2) fine sandy loam; weak, fine, granular structure; very friable; very strongly acid; clear, smooth boundary.

B1t—10 to 14 inches, dark yellowish-brown (10YR 4/4) sandy clay loam; weak, medium, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.

B21t—14 to 22 inches, yellowish-red (5YR 4/8) sandy clay loam; moderate, medium, subangular blocky structure; friable; very strongly acid; gradual, wavy boundary.

B22t—22 to 26 inches, yellowish-red (5YR 4/8) sandy clay loam; common, medium, distinct, yellowish-brown and red mottles; moderate, medium, subangular blocky structure; friable to firm; extremely acid; clear, wavy boundary.

B3t—26 to 130 inches, dark-red (2.5YR 3/6) sandy clay; few, coarse, distinct, yellowish-brown (10YR 5/6) mottles; moderate, medium, subangular blocky structure; friable; extremely acid.

IIC—130 inches +, gravel.

In small areas these soils have quartz and quartzite pebbles up to 2 inches in diameter scattered on the surface and throughout the profile. The principal types are fine sandy loam and loam. The color in the finest textured part of the subsoil ranges from yellowish red to strong brown. Beds of stratified sand and gravel occur at a depth of 4 to 7 feet.

REDDISH-BROWN LATERITIC SOILS

The Reddish-Brown Lateritic great soil group consists of soils that formed under forest vegetation in a humid tropical climate having wet and dry seasons. These soils have a dark reddish-brown, granular A horizon; a red, friable clay B horizon; and red or reticulately mottled lateritic parent material.

The Reddish-Brown Lateritic soils in this county are those of the Davidson series.

Davidson Series

The Davidson series consists of well-drained, strongly acid soils on uplands. These soils formed in material weathered from basic and acidic rocks, such as hornblende, diorite, and granite gneiss. They have a darker colored A horizon than Cecil and Madison soils and are less micaceous. They have a redder, more clayey subsoil than Appling soils.

Following is a profile of Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded, in a moist wooded area of second-growth pines 1.1 miles east of Mt. Zion Church, in sec. 4, T. 22 S., R. 12 E.:

Ap—0 to 6 inches, dark reddish-brown (5YR 3/4) gravelly sandy loam; weak, fine, crumb structure; very friable; strongly acid; clear, wavy boundary; 25 percent gravel.

B1t—6 to 12 inches, dark reddish-brown (2.5YR 3/4) clay; weak, fine, subangular blocky structure; friable; strongly acid; gradual, wavy boundary.

B2t—12 to 36 inches, dark-red (2.5YR 3/6) clay; moderate, fine to medium, subangular blocky structure; firm to friable; very strongly acid; gradual, wavy boundary.

C—36 to 40 inches +, partly weathered, yellow hornblende schist that crushes to clay loam.

The color of the surface layer ranges from dark reddish brown to reddish brown, and the texture from gravelly sandy loam to loam. The texture of the subsoil ranges from clay to sandy clay. In most areas the depth to rock ranges from 24 to 45 inches. Angular quartzite gravel ¼ inch to 2 inches in diameter is scattered on the surface and, in most places, throughout the profile.

Intrazonal soils

Intrazonal soils have more or less well-developed profile characteristics that reflect the dominant influence of a local factor of relief or parent material over the effects of climate and vegetation. The intrazonal order is represented in Randolph County by the Low-Humic Gley great soil group.

LOW-HUMIC GLEY SOILS

The Low-Humic Gley great soil group consists of poorly drained soils that have a very thin A horizon, moderately high in organic matter, over a mottled gray and brown, gleyed mineral horizon that differs little from the A horizon in texture (*3*).

The Low-Humic Gley soils in this county are those of the Roanoke and Wehadkee series.

Roanoke Series

The Roanoke series consists of poorly drained soils on low stream terraces. These soils are the most poorly drained members of the Wickham-Altavista-Augusta-Roanoke catena. They have a compact B horizon, and the solum is waterlogged for many months of the year. The lower part of the profile is gleyed. These soils are lighter colored and more mottled than Altavista soils.

The Roanoke soils in this county formed in old alluvium washed from the Piedmont Upland.

Following is a profile of Roanoke silt loam in a pasture 1 mile north of Rock Mills Methodist Church, 1 mile east of Jess Hearn's house, and 0.3 mile south of a field road, in the SW¼SW¼ sec. 22, T. 21 S., R. 13 E.:

Ap—0 to 5 inches, dark grayish-brown (2.5Y 4/2) silt loam; few, fine, prominent, gray (5Y 5/1) mottles; weak, fine, granular structure; very friable; strongly acid; clear, smooth boundary.

B1g—5 to 11 inches, gray (N 5/0) sandy clay loam; few, fine, faint, light olive-brown (2.5Y 5/4) mottles; weak, fine, subangular blocky structure; friable; strongly acid; clear, wavy boundary.

B2g—11 to 45 inches +, light-gray to gray (N 6/0) sandy clay; common, medium, distinct, light olive-brown (2.5Y 5/6) mottles; weak, fine, subangular blocky structure to massive; friable; strongly acid; clear, wavy boundary.

The color of the surface layer ranges from dark grayish brown to dark gray. The texture of the subsoil ranges from sandy clay loam to sandy clay. The depth to unconsolidated material ranges from 40 to 60 inches.

Wehadkee Series

The Wehadkee series consists of deep, poorly drained soils on nearly level first bottoms along the larger streams. The water table is at or near the surface except during the driest periods. These soils are finer textured than Buncombe soils. They are more poorly drained than Chewacla and Congaree soils.

The Wehadkee soils in this county formed in recent sediments washed from the Piedmont Upland.

Following is a profile of Wehadkee fine sandy loam in an idle area 0.5 mile north of Rock Mills Baptist Church, on the east side of a paved road, in the SW¼NE¼ sec. 28, T. 21 S., R. 13 E.:

A1—0 to 2 inches, dark grayish-brown (2.5Y 4/2) fine sandy loam; weak, fine, granular structure; very friable; clear, smooth boundary.

A2—2 to 10 inches, olive (5Y 5/3) fine sandy loam; few, fine, faint mottles of light olive gray (5Y 6/2); weak, fine, subangular blocky structure; friable; strongly acid; gradual, wavy boundary.

C1g—10 to 15 inches, olive-gray (5Y 5/2) fine sandy loam; many, medium, distinct mottles of pale yellow (5Y 7/3) and pale olive (5Y 6/3); weak, fine, granular structure; very friable; strongly acid; gradual, wavy boundary.

C2g—15 to 32 inches, light olive-gray (5Y 6/2) light sandy clay loam; many, medium, distinct mottles of pale yellow (5Y 8/4) and brownish yellow (10YR 6/8); massive; very friable; strongly acid.

C3g—32 to 40 inches +, white (5Y 8/2) sandy clay loam; common, medium, distinct mottles of very pale brown (10YR 7/4); massive; very friable; strongly acid.

The color of the surface layer ranges from brown through dark grayish brown to olive, and the texture from fine sandy loam to silt loam. The texture of the subsurface layers ranges from fine sandy loam to sandy clay loam and light sandy clay loam. This soil is 30 to 60 inches deep. In places the profile contains strata of sand and silt. Small mica flakes are abundant in most profiles.

Azonal soils

Azonal soils lack distinct, genetically related horizons, either because the soils are young or because the parent material is resistant to soil-forming processes. The azonal order is represented in Randolph County by the Lithosol and Alluvial great soil groups.

LITHOSOLS

The Lithosol great soil group consists of soils that have an incomplete solum or no clearly expressed soil morphology. These immature soils are thinly developed over rock (3). They normally occur in rough, hilly or mountainous areas. Some areas are stony, and in many places the parent material or bedrock is exposed. The original vegetation consisted of open stands of hardwoods.

The Lithosols in Randolph County are represented by soils of the Louisa, Louisburg, and Wilkes series. These soils occupy most of the steep slopes on uplands, where geologic erosion has nearly kept pace with soil formation.

Louisa Series

The Louisa series consists of shallow, well-drained, strongly acid or very strongly acid soils. These soils were derived mainly from quartz mica schist, mica schist, and graphitic schist, and partly from phyllite. They are not so deep or so well developed as Madison, Cecil, and Appling soils. The material underlying the A horizon has weakly expressed horizons. This material is more friable and more micaceous than that in Madison, Cecil, and Appling soils.

Following is a profile of Louisa stony sandy loam, 15 to 40 percent slopes, 0.3 mile south of a gas pipeline and 100 feet west of Wadley-Wedowee highway, in the NE¼SE¼ sec. 1, T. 22 S., R. 10 E.:

O—1 inch to 0, partly decomposed leaves and twigs.

A1—0 to 3 inches, brown to dark-brown (10YR 4/3) stony sandy loam; weak, fine, granular structure; very friable; very strongly acid; clear, smooth boundary.

A3—3 to 9 inches, yellowish-brown (10YR 5/4) sandy loam; weak, fine, granular structure; very friable; very strongly acid; gradual, wavy boundary.

C—9 to 24 inches, yellowish-brown (10YR 5/6) loam; weak, fine, subangular blocky structure; very strongly acid; 50 percent schist fragments up to 3 inches in diameter.

R—24 inches +, mica schist.

The color of the surface layer ranges from very dark grayish brown through brown to dark brown and yellowish red. The texture ranges from gravelly or stony sandy loam to loam. The color of the subsurface layer ranges from yellowish brown to red, and the texture from loam to sandy clay loam. In places the surface layer is underlain by a red layer 6 inches thick or less. Schist fragments 1/8 inch to 3 inches in diameter are on the surface and throughout the profile.

Louisburg Series

The Louisburg soils are shallow, well-drained, strongly acid or very strongly acid soils on uplands. These soils formed in granite, gneiss, and schist. They are not so deep or so well developed as Pacolet, Wedowee, Cecil, or Appling soils. The B horizon is weakly expressed and shows only a slight degree of horizonation.

Following is a profile of Louisburg stony sandy loam, 6 to 10 percent slopes, eroded, in a forest 0.5 mile southwest of Paran Church and 25 feet south of Alabama Highway 22, in the SE¼SE¼ sec. 11, T. 21 S., R. 13 E.:

A—0 to 4 inches, very dark grayish-brown (2.5Y 3/2) to dark grayish-brown (2.5Y 4/2) stony sandy loam; weak, fine, granular structure; very friable; very strongly acid; clear, smooth boundary; 20 percent of stones are more than 10 inches in diameter.

B—4 to 16 inches, grayish-brown (2.5Y 5/2) to light olive-brown (2.5Y 5/4) stony sandy loam; weak, fine, granular structure; very friable; very strongly acid; distinct, wavy boundary; 40 percent of stones are 10 inches or more in diameter.

C—16 to 36 inches, light reddish-brown (5YR 6/4) saprolitic granite that crushes to sandy clay loam.

The color of the surface layer ranges from very dark grayish brown to light olive brown. The color of the subsoil ranges from grayish brown through light olive brown to yellowish red, and the texture from sandy loam to light sandy clay loam.

Wilkes Series

The Wilkes series consists of shallow, well-drained soils on uplands. These soils formed in a mixture of acidic and basic rocks, such as granite gneiss, hornblende gneiss, schist, and chloritic schist. Wilkes soils are not so deep or so well developed as Davidson soils.

Following is a profile of Wilkes sandy loam, 6 to 10 percent slopes, eroded, in a moist wooded area 0.6 mile south of the pumping station, in a roadbank on the west side of a paved road, in the SW¼SW¼ sec. 33, T. 21 S., R. 11 E.:

Ap—0 to 7 inches, brown to dark-brown (10YR 4/3) sandy loam; weak, fine, granular structure; very friable; medium acid; clear, smooth boundary; clayey layers.

B—7 to 12 inches, brown to dark-brown (7.5YR 4/4) loam; weak, medium, subangular blocky structure; friable; medium acid; abrupt, wavy boundary; thin clayey layers.

R—12 inches +, light-colored chloritic schist with dikes of dark-colored basic rock.

The color of the surface layer ranges from dark brown through brown to olive brown. The color of the subsoil ranges from brown through dark brown to dark yellowish brown, and the texture from loam to clay. In some places these soils have a thin Bt horizon. They vary considerably within short distances. The depth to bedrock ranges from 12 to 30 inches. Rock crops out in places.

ALLUVIAL SOILS

The Alluvial great soil group consists of transported and recently deposited alluvium that has been modified little or not at all by soil-forming processes. These soils occur on first bottoms and at the head of small drainageways. The horizons in the profile are not genetically related because the soil material has not been in place long enough to be affected by the active factors of soil formation.

The Alluvial soils in this county are those of the Buncombe, Chewacla, Congaree, Mantachie, and Ochlockonee series.

Buncombe Series

The Buncombe series consists of deep, excessively drained, sandy alluvial soils along the larger streams. Buncombe soils are coarser textured than Congaree or Chewacla soils.

The Buncombe soils in this county formed in alluvium washed from the Piedmont Upland.

Following is a profile of Buncombe loamy sand in a cultivated area ¼ mile south of Cole's bridge and 100 yards north of the Little Tallapoosa River, in the southeast side of a gravel pit, in the SE¼SE¼ sec. 11, T. 18 S., R. 12 E.:

Ap—0 to 8 inches, dark-brown (10YR 3/3) loamy sand; weak, fine, granular structure; loose; very strongly acid; clear, smooth boundary.

C1—8 to 12 inches, very dark grayish-brown (10YR 3/2) loamy fine sand; weak, fine, granular structure; loose; very strongly acid; clear, smooth boundary.

C2—12 to 32 inches, dark yellowish-brown (10YR 4/4) loamy sand; single grain; loose; very strongly acid; distinct, wavy boundary.

C3—32 to 60 inches, yellowish-brown (10YR 5/8) loamy fine sand; common, medium, distinct, brown (10YR 5/3) mottles; single grain; loose; very strongly acid.

The color of the surface layer ranges from dark brown to grayish brown. The color of the subsurface layers ranges from yellowish brown through dark yellowish brown to very dark grayish brown, and the texture from loamy sand to loamy fine sand. The subsurface layers vary considerably in thickness and other properties. The depth to the underlying beds of stratified sand and gravel ranges from 3 to 7 feet. Mica flakes are common throughout most profiles.

Chewacla Series

The Chewacla series consists of deep, moderately well drained or somewhat poorly drained alluvial soils. These soils are not so well drained as Congaree soils but are better drained than Wehadkee soils. They are finer textured than Buncombe soils.

The Chewacla soils in this county formed in sediments washed from the Piedmont Upland. They occur on nearly level first bottoms along the Tallapoosa Rivers and the larger creeks.

Following is a profile of Chewacla silt loam in a moist pasture 1.7 miles northeast of Wadley and 0.2 mile east of Wadley-Wedowee road, in the SE¼SE¼ sec. 1, T. 22 S., R. 10 E.:

Ap—0 to 9 inches, dark-brown (7.5YR 4/4) silt loam; weak, fine, granular structure; friable; abundant fine roots; strongly acid; gradual, smooth boundary.

C1—9 to 15 inches, brown (7.5YR 5/4) silt loam; few, fine, faint mottles of very dark grayish brown (10YR 3/2) in lower part; weak, fine, granular structure; friable; strongly acid; abrupt, smooth boundary.

C2—15 to 18 inches, yellowish-red (5YR 4/8) silt loam; massive; friable; strongly acid; abrupt, smooth boundary.

C3—18 to 60 inches +, mottled dark yellowish-brown (10YR 4/4) and grayish-brown (2.5Y 5/2) loam; massive; friable; strongly acid; large amount of finely divided mica.

The color of the surface layer ranges from brown to dark brown. The color of the subsurface layers ranges from dark yellowish brown through brown to yellowish red, and the texture is mainly loam and silt loam but in places is silty clay loam. Most profiles contain numerous small mica flakes, and some contain strata of silt and sand. The depth to mottling ranges from 8 to 24 inches.

Congaree Series

The Congaree series consists of nearly level, deep, well-drained alluvial soils that are strongly acid or very strongly acid. These soils are not so coarse textured as

Buncombe soils. They are better drained than Chewacla and Wehadkee soils.

The Congaree soils in this county formed in sediments washed from the Piedmont Upland.

Following is a profile of Congaree silt loam in a moist pasture 1.2 miles east of Springfield Church, 0.5 mile east of road, and 50 yards south of the big tree, in the NE¼SE¼ sec. 9, T. 21 S., R. 13 E.:

Ap—0 to 4 inches, brown (10YR 4/3) silt loam; weak, fine, granular structure; very friable; abundant fine roots; strongly acid; clear, smooth boundary.
C1—4 to 24 inches, brown (7.5YR 4/4) silt loam; weak, fine, granular structure; very friable; strongly acid; gradual, wavy boundary.
C2—24 to 56 inches +, dark yellowish-brown (10YR 4/4) fine sandy loam; massive; abundant small mica flakes; strongly acid.

These soils are 30 to 60 inches deep. The thickness of each layer varies considerably, and in places the profile contains strata of silt and sand. The texture of the subsurface layers ranges mainly from fine sandy loam to silt loam but in places is silty clay loam. Most profiles contain abundant small mica flakes. The depth to mottling ranges from 36 to 60 inches.

Mantachie Series

The Mantachie series consists of deep, moderately well drained or somewhat poorly drained, strongly acid soils. These soils occur on nearly level first bottoms. They are not so well drained as Ochlockonee and Congaree soils but are better drained than Wehadkee soils. They are coarser textured than Chewacla soils and finer textured than Buncombe soils.

The Mantachie soils in this county formed in alluvium washed from the Piedmont Upland.

Following is a profile of Mantachie fine sandy loam in a moist wooded area of second-growth pine, 2.1 miles northwest of Graham, 0.4 mile west of paved road, and 200 feet southeast of the Little Tallapoosa River, in the NE¼SE¼ sec. 35, T. 17 S., R 12 E.:

O—2 inches to 0, pine needles and leaves.
A1—0 to 12 inches, dark-brown (10YR 4/3) fine sandy loam; weak, fine, granular structure; very friable; numerous fine roots; strongly acid; clear, smooth boundary.
C1—12 to 27 inches, very dark grayish-brown (2.5Y 3/2) sandy loam; many, medium, distinct mottles of light olive gray (5Y 6/2) and pale yellow (5Y 7/4); massive; very friable; strongly acid; clear, wavy boundary.
C2—27 to 42 inches +, mottled yellow (2.5Y 7/6) and light-gray (5Y 7/2) sandy loam; massive; very friable; strongly acid.

The color of the surface layer ranges from brown to dark brown, and the texture from fine sandy loam to loam. The color of the subsurface layers ranges from yellow through yellowish brown and dark brown to very dark grayish brown, and the texture from fine sandy loam to loam. Most profiles have mica flakes throughout and in many places contain strata of sand and silt. The depth to mottling ranges from 8 to 24 inches.

Ochlockonee Series

The Ochlockonee series consists of nearly level, deep, well-drained alluvial soils that are strongly acid. These soils are not so fine textured as Congaree soils but are not so coarse textured as Buncombe soils. They are better drained than Mantachie and Chewacla soils.

The Ochlockonee soils in this county formed in sediments washed from the Piedmont Upland.

Following is a profile of Ochlockonee fine sandy loam in a wooded area, 100 yards south of the steel bridge on Cornhouse Creek, in the NW¼NW¼ sec. 10, T. 21 S., R. 11 E.:

A1—0 to 8 inches, dark-brown to brown (10YR 4/3) fine sandy loam; weak, fine, granular structure; very friable; strongly acid; clear, smooth boundary.
C1—8 to 24 inches, yellowish-brown (10YR 5/4) sandy loam; weak, fine, granular structure or massive; very friable; strongly acid; clear, smooth boundary.
C2—24 to 40 inches +, dark-brown to brown (7.5YR 4/4) sandy loam; weak, fine, granular structure or massive; very friable; strongly acid.

These soils are 30 to 60 inches deep. The thickness of each layer varies considerably, and in places the profile contains strata of sand and silt. Small mica flakes are abundant throughout the profile. Mottling usually occurs at a depth below 30 inches.

General Nature of the County

Randolph County was organized in 1832 and was named for John Randolph, a noted Virginia statesman. Wedowee (then McDonough), Roanoke, and Louina were the chief trading points. Nearly all of the first settlers came from Georgia. According to the 1960 census, the population of Randolph County was 19,477, as compared with 22,513 in 1950.

Geology, Physiography, and Drainage

Randolph County is entirely within the Piedmont Plateau. It is underlain by igneous and metamorphic rocks (*1*) including Ashland mica schist, the Wedowee formation, igneous schist, and gneiss. Most of the Madison and Louisa soils were derived from the Ashland mica schist. The slaty Louisa soils and some of the Madison soils were derived from the Wedowee formation, which consists of slate, phyllite, quartzite, and schist. In many places this formation contains amorphous graphite, which makes the rocks grayish black or black. The Cecil, Appling, and associated soils were derived from igneous schist and gneiss.

Most of the county is strongly dissected by drainageways. The gently sloping to sloping areas are along the broad ridges between the interstream divides. The western half of the county along the Tallapoosa River is steep and has narrow, sloping ridgetops. The flood plains are narrow and nearly level.

About 85 percent of the county drains into the Tallapoosa and Little Tallapoosa Rivers. The rest of the county drains into Wehadkee Creek and then into the Chattahoochee River in Troup County, Georgia. The divide between the two watersheds is 700 to 1,200 feet above sea level. The lowest elevation is in the southern part of the county, and the highest elevation is in the northern part.

Water Supply

The wells and springs in the county provide an abundant supply of water for farm and home use. The wells are about 30 to 70 feet deep and supply water throughout

the year. Rivers, creeks, and lakes furnish water all year, even in the driest seasons, for cities, industries, and livestock. Approximately 200 ponds furnish water for agricultural use and for recreation. The High Pine Creek Watershed Project, which includes nine flood control structures that total 265 acres, provides water to municipalities and for recreational purposes.

Industry

There are in Randolph County eight facilities for the manufacture of textiles and garments, which is the largest industry. Other industrial facilities include two concrete plants, a door factory, a loom shuttle factory, a plant for processing marble and granite, a mattress and spring factory, a fertilizer plant, an ice plant, a syrup factory, two mica-processing plants, several sawmills and planing mills, and several feed mills, flour mills, cotton gins, and hatcheries. Many employees of industrial plants are part-time farmers.

Agriculture

The 1959 census showed 1,737 farms in the county, and the average size of farms as 139.5 acres. Farming has changed during the past several years. Formerly most farms were of the general type, and cotton and corn were the main crops. The acreage in cotton and corn has steadily decreased during the past 30 years. Broilers, beef cattle, and timber are replacing row crops. Many landowners are working in factories in Roanoke and in nearby Bowdon, Ga.

Livestock, livestock products, forest products, cotton, and corn are now the major sources of farm income. Cotton, corn, and small grain are usually sold to local buyers. Poultry and pimento peppers are grown under contract. Livestock is sold at the Randolph County Sale Barn at Roanoke. Major markets that can be reached within a few hours include Birmingham and Montgomery, Ala., and Atlanta, Ga.

The acreage of the principal field crops and the number of grapevines and fruit and nut trees in specified years is shown in table 10.

TABLE 10.—*Acreage of principal crops and number of grapevines and fruit and nut trees of bearing age, in stated years*

Crops	1950	1959
	Acres	*Acres*
Cropland harvested	73, 365	29, 841
Cotton	20, 370	5, 960
Corn for all purposes	38, 637	18, 847
Hay crops:		
Alfalfa	681	299
Clover and grasses	172	153
Lespedeza	1, 901	763
Other hay	1, 616	586
Fruit and nut trees [1]:	*Number*	*Number*
Apple	27, 966	5, 090
Peach	22, 375	3, 355
Pear	2, 474	612
Pecan	2, 983	1, 158
Grapevines [2]	3,·078	760

[1] Does not include farms with less than 20 trees.
[2] Does not include farms with less than 20 grapevines.

Climate [6]

The climate of Randolph County is temperate, and rainfall is well distributed throughout the year.

Summers are usually long; warm weather lasts from sometime in May into September, and there are few breaks in the heat in midsummer. The average summer has about 5 days—1 in June, 2 in July, 1 in August, and 1 in September—when the maximum temperature is 100°F. or higher. Temperatures of 90° or higher are recorded on an average of 87 days per year.

Fall is a transition season. The summerlike weather early in September changes to Indian summer and then to the prewinter cold spells, which begin to be felt in November. Generally, fall is the most pleasant season. From late in September to early in November, rainfall is light, the percentage of sunshine is high, and extremes in temperature are rare.

Winters in this area range from mild to cold but are relatively short. Freezing temperatures occur about 51 times a year. There is a good chance of several snow flurries during the winter, but a snowfall that leaves a cover for more than 1 or 2 days is unusual. The average winter has about 7 days when the temperature falls to 20° or lower, and 1 day when it falls to 10° or lower.

Spring is the most changeable season. In March the days are frequently cold and windy, but in May they are generally warm and pleasant. Severe local thunderstorms and tornadoes are most likely to occur in spring.

In an average year, about 76 days have 0.10 inch or more of rain, 39 days have 0.50 inch or more, and 17 days have 1 inch or more. The sun shines for about 66 percent of the daylight hours. The percentage ranges from a minimum of 50 percent in January to a maximum average of 74 percent in September.

Table 11 shows, by months, the average daily maximum temperature, the average daily minimum temperature, and the average precipitation. Table 12 shows the probabilities of the last low temperature in spring, and table 13 shows the probabilities of the first low temperature in fall.

The average daily evapotranspiration (*9*), by months, in inches of water, is as follows:

	Inches		*Inches*
January	0. 026	July	0. 154
February	. 048	August	. 141
March	. 067	September	. 120
April	. 107	October	. 080
May	. 142	November	. 043
June	. 173	December	. 024

Wind and humidity records are not available for Randolph County, but records from the nearby station at Anniston, in Calhoun County, show that the prevailing winds are from the east and west in summer and from the east and northeast in winter, and that the average speed is about 6 miles per hour. The average relative humidity at noon ranges from 44 percent in April to 65 percent in January. The average relative humidity for the year, based on four daily readings taken at 12 a.m., 6 a.m., 12 p.m., and 6 p.m., is about 73 percent.

The disastrous drought of 1954 was the worst drought in Alabama since recordkeeping began nearly 100 years ago. Less severe droughts occur once or twice every 10 years. By definition, a drought occurs when there is no water in

[6] ARTHUR R. LONG, Alabama climatologist, prepared this section.

TABLE 11.—*Temperature and precipitation data*

[Temperature and rainfall data from records at Rock Mills, Randolph County. Snowfall data from records at Anniston, Calhoun County]

Month	Temperature				Precipitation			
	Average daily maximum	Average daily minimum	2 years in 10 will have at least 4 days with—		Average total	1 year in 10 will have—		Average snowfall
			Maximum temperature equal to or higher than—	Minimum temperature equal to or lower than—		Less than—	More than—	
	°F.	°F.	°F.	°F.	In.	In.	In.	In.
January	58	35	73	18	5.0	2.1	8.7	0.9
February	62	37	75	21	5.4	2.2	10.2	.2
March	67	41	80	27	6.6	3.7	9.5	.3
April	77	48	87	33	4.8	2.1	9.2	(1)
May	84	56	93	45	3.4	1.0	5.7	0
June	91	64	99	55	4.0	1.8	6.9	0
July	92	67	100	62	5.2	1.9	9.5	0
August	92	66	97	59	4.1	1.6	7.4	0
September	86	61	96	51	3.6	1.0	6.8	0
October	77	49	89	31	1.7	.1	4.3	(1)
November	66	38	79	23	3.9	1.0	8.9	.1
December	58	33	71	19	4.8	1.7	8.2	.2
Year	76	50	[2] 101	[3] 11	52.5	45.5	70.3	1.7

[1] Trace (less than 0.05 inch).
[2] Average annual highest maximum.
[3] Average annual lowest minimum.

TABLE 12.—*Probabilities of last low temperatures in spring*

[Based on records at Rock Mills]

Temperature	1 year in 10 later than—	2 years in 10 later than—	5 years in 10 later than—
°F.			
40 or lower	May 14	May 12	May 3
36 or lower	May 4	April 21	April 18
32 or lower	April 20	April 17	April 7
28 or lower	April 10	April 4	March 22
24 or lower	April 5	March 22	March 2
20 or lower	March 28	March 9	February 13
16 or lower	March 20	March 6	February 12

the soil available to plants (*9*). The frequency and severity of drought depends on the capacity of the soil to hold available moisture, on precipitation, and on the amount of water used or transpired by plants. Even in a normal year, there are periods when rainfall does not meet the water needs of most crops. Consequently, in most years supplementary irrigation is needed for maximum crop production in most parts of the State. During a severe drought, however, the supply of water for irrigation is likely to be limited or nonexistent.

Estimates of the frequency of drought days in Randolph County are shown in table 14. These estimates were obtained by using the Penman method for computing evapotranspiration (the consumption of soil moisture by plants and evaporation) and by defining a drought day as a day during which no water is available to plants. The total possible amount of stored moisture available to plants varies with soils and with the depth of roots. Table 14 shows the minimum number of drought days for four different moisture-storage capacities and for four levels of probability. For example, if a soil has a 2-inch storage capacity, the chance is 50–50 that there will be 14 drought days in June.

TABLE 13.—*Probabilities of first low temperatures in fall*

[Based on records at Rock Mills]

Temperature	1 year in 10 earlier than—	2 years in 10 earlier than—	5 years in 10 earlier than—
°F.			
40 or lower	October 2	October 6	October 16
36 or lower	October 6	October 14	October 24
32 or lower	October 19	October 22	November 2
28 or lower	October 29	October 31	November 7
24 or lower	October 31	November 4	November 24
20 or lower	November 10	November 20	November 30
16 or lower	November 27	November 28	December 11

TABLE 14.—*Probabilities of drought days on soils of four different moisture-storage capacities*

[A drought day is a day during which no water is available to plants]

Probability by month [1]	Minimum number of drought days if soil has a moisture-storage capacity of—			
	1 inch	2 inches	3 inches	5 inches
April				
1 in 10	15	7	0	0
2 in 10	12	5	0	0
3 in 10	11	2	0	0
5 in 10	8	1	0	0
May				
1 in 10	25	21	19	7
2 in 10	23	18	14	4
3 in 10	21	16	11	1
5 in 10	17	12	6	0
June				
1 in 10	25	25	24	21
2 in 10	23	22	20	16
3 in 10	20	19	18	12
5 in 10	17	14	13	6
July				
1 in 10	22	20	20	18
2 in 10	18	17	16	14
3 in 10	16	13	13	11
5 in 10	12	9	7	5
August				
1 in 10	22	18	17	16
2 in 10	19	14	12	10
3 in 10	17	12	8	6
5 in 10	14	8	3	0
September				
1 in 10	26	25	24	21
2 in 10	22	20	20	15
3 in 10	20	17	16	10
5 in 10	16	12	8	3
October				
1 in 10	26	26	26	26
2 in 10	24	23	22	22
3 in 10	22	20	18	16
5 in 10	19	14	8	1

[1] January, February, March, November, and December are not shown because crops are rarely damaged by drought in these months.

Literature Cited

(1) ADAMS, GEORGE I., BUTTS, CHARLES, STEPHENSON, L. W., AND COOKE, WYTHE.
1926. GEOLOGY OF ALABAMA. Ala. Geol. Survey Spec. Rept. No. 14, 312 pp., illus.

(2) AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS.
1961. STANDARD SPECIFICATIONS FOR HIGHWAY MATERIALS AND METHODS OF SAMPLING AND TESTING. Ed. 8, v. 2, pp. 273 and 302, illus.

(3) BALDWIN, MARK, KELLOGG, CHARLES E., AND THORP, JAMES.
1938. SOIL CLASSIFICATION. U.S. Dept. Agr. Ybk. pp. 979–1001, illus.

(4) SIMONSON, ROY W.
1949. GENESIS AND CLASSIFICATION OF RED-YELLOW PODZOLIC SOILS. Soil Sci. Soc. AMER. Proc. 14: 316–319.

(5) ———
1962. SOIL CLASSIFICATION IN THE UNITED STATES. Sci. 137: 1027–1034.

(6) UNITED STATES DEPARTMENT OF AGRICULTURE.
1929. VOLUME, YIELD, AND STAND TABLES FOR SECOND-GROWTH SOUTHERN PINES. Misc. Pub. No. 50, 202 pp. [Now out of print.]

(7) ———
1960. MANAGEMENT AND INVENTORY OF SOUTHERN HARDWOODS. Forest Serv., Agr. HANDBOOK No. 181, 102 pp.

(8) ———
1963. ALABAMA FOREST. Table 40, Forest Serv. Resource Bul. SO-3, South. Forest Expt. Sta.

(9) WARD, H. S., VAN BAVEL, C. H. M., COPE, J. T., JR., WARE, L. M., AND BOUWER, H.
1959. AGRICULTURAL DROUGHT IN ALABAMA. Agr. Expt. Sta., Ala. Polytech. Inst., Bul. 316, 53 pp.

(10) WATERWAYS EXPERIMENT STATION, CORPS OF ENGINEERS.
1953. THE UNIFIED SOIL CLASSIFICATION SYSTEM. Tech. Memo. No. 3–357, v. 2 and app., 44 pp., illus.

Glossary

Alluvium. Soil material, such as sand, silt, or clay, that has been deposited on land by streams.

Available water capacity. The capacity of a soil to hold water in a form available to plants. Amount of moisture held in soil between field capacity, or about one-third atmosphere of tension, and the wilting coefficient, or about 15 atmospheres of tension.

Clay. As a soil separate, mineral soil particles that are less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt (See also, Texture, soil.)

Concretions. Grains, pellets, or nodules that consist of concentrations of compounds or of soil grains cemented together. They are of various sizes, shapes, and colors. The composition of some concretions is unlike that of the surrounding soil. Calcium carbonate and iron oxide are examples of material commonly found in concretions.

Flood plain. Nearly level land, consisting of stream sediments, that borders a stream and is subject to flooding unless protected artificially.

Horizon, soil. A layer of soil, approximately parallel to the surface, that has distinct characteristics produced by soil-forming processes.

Mottling, soil. Irregularly marked with spots of different colors that vary in number and size. Mottling in soils usually indicates poor aeration and lack of drainage. Descriptive terms are as follows: Abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent.* The size measurements are these: *fine,* less than 5 millimeters (about 0.2 inch) in diameter along the greatest dimension; *medium,* ranging from 5 millimeters to 15 millimeters (about 0.2 to 0.6 inch) in diameter along the greatest dimension; and *coarse,* more than 15 millimeters (about 0.6 inch) in diameter along the greatest dimension.

Permeability. The ability of the soil to transmit air or water. Terms used to describe permeability are as follows: *very slow, slow, moderately slow, moderate, moderately rapid, rapid,* and *very rapid.*

Sand. As a soil separate, individual rock or mineral fragments 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz, but sand may be any mineral composition. As a textural class, soil that is 85 percent or more sand, and not more than 10 percent clay. (See also, Texture, soil.)

Silt. As a soil separate, individual particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a textural class, soil that is 80 percent or more silt and less than 12 percent clay. (See also, Texture, soil.)

Structure, soil. The arrangement of primary soil particles into compound particles or clusters that are separated from adjoining aggregates and have properties unlike those of an equal mass of unaggregated primary soil particles. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular. Structureless* soils are (1) *single grain* (each grain by itself, as in dune sand) or (2) *massive* (the particles adhering together without any regular cleavage, as in many claypans and hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the profile below plow depth.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea. Stream terraces are frequently called second bottoms, as contrasted to flood plains, and are seldom subject to overflow. Marine terraces were deposited by the sea and are generally wide.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay.* The sand, loamy sand, and sandy loam classes may be further divided by adding the words "coarse," "fine," or "very fine" to the name of the textural class.

Tilth, soil. The condition of the soil, especially of the soil structure, in relation to the growth of plants. Good tilth refers to the friable state and is associated with high noncapillary porosity and stable, granular structure. A soil in poor tilth is nonfriable, hard, nonaggregated, and difficult to till.

GUIDE TO MAPPING UNITS

[For a full description of a mapping unit, read both the description of the mapping unit and the description of the soil series to which the mapping unit belongs.

[See table 1, page 5, for approximate acreage and proportionate extent of soils; see table 2, page 27, for predicted average yields of principal crops; see table 5, page 38, table 6, page 42, and table 7, page 44, for engineering properties of the soils]

Map symbol	Mapping unit	Described on page	Capability unit		Woodland group		Wildlife group	
			Number	Page	Number	Page	Number	Page
AaA	Altavista fine sandy loam, 0 to 2 percent slopes	6	IIw-31	22	1	30	1	33
AaB	Altavista fine sandy loam, 2 to 6 percent slopes	6	IIe-32	22	1	30	1	33
AgB	Altavista gravelly fine sandy loam, 2 to 6 percent slopes	6	IIe-32	22	1	30	1	33
AgC2	Altavista gravelly fine sandy loam, 6 to 10 percent slopes, eroded	6	IIIe-32	23	1	30	1	33
AlB2	Appling gravelly sandy loam, 2 to 6 percent slopes, eroded	7	IIe-32	22	1	30	1	33
AlC2	Appling gravelly sandy loam, 6 to 10 percent slopes, eroded	7	IIIe-32	23	1	30	1	33
ApB2	Appling sandy loam, 2 to 6 percent slopes, eroded	6	IIe-32	22	1	30	1	33
ApC2	Appling sandy loam, 6 to 10 percent slopes, eroded	7	IIIe-32	23	1	30	1	33
AuA	Augusta fine sandy loam, 0 to 2 percent slopes	7	IIIw-31	23	6	32	4	35
AuB	Augusta fine sandy loam, 2 to 6 percent slopes	7	IIIw-31	23	6	32	4	35
Bu	Buncombe loamy sand	8	IIIs-31	24	7	32	3	35
CeB3	Cecil gravelly clay loam, 2 to 6 percent slopes, severely eroded	8	IIIe-331	23	2	30	1	33
CeC3	Cecil gravelly clay loam, 6 to 10 percent slopes, severely eroded	8	IVe-331	24	2	30	1	33
CeD3	Cecil gravelly clay loam, 10 to 15 percent slopes, severely eroded	9	VIe-331	25	2	30	1	33
CeE3	Cecil gravelly clay loam, 15 to 25 percent slopes, severely eroded	9	VIIe-331	25	2	30	1	33
CgB2	Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded	8	IIe-31	21	1	30	1	33
CgC2	Cecil gravelly sandy loam, 6 to 10 percent slopes, eroded	8	IIIe-31	23	1	30	1	33
CgD2	Cecil gravelly sandy loam, 10 to 15 percent slopes, eroded	8	IVe-31	24	1	30	1	33
Cm	Cecil-Madison-Urban land complex	9	IVe-31	24	---	--	---	--
Cn	Chewacla silt loam	9	IIIw-32	23	5	32	3	35
Co	Congaree silt loam	10	IIw-32	22	5	32	3	35
DaB3	Davidson gravelly clay loam, 2 to 6 percent slopes, severely eroded	11	IIIe-331	23	2	30	1	33
DaC3	Davidson gravelly clay loam, 6 to 10 percent slopes, severely eroded	11	IVe-331	24	2	30	1	33
DaD3	Davidson gravelly clay loam, 10 to 15 percent slopes, severely eroded	11	IVe-331	24	2	30	1	33
DgB2	Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded	10	IIe-31	21	1	30	1	33
DgC2	Davidson gravelly sandy loam, 6 to 10 percent slopes, eroded	10	IIIe-31	23	1	30	1	33
DgD2	Davidson gravelly sandy loam, 10 to 15 percent slopes, eroded	10	IVe-31	24	1	30	1	33
DgE2	Davidson gravelly sandy loam, 15 to 25 percent slopes, eroded	10	VIe-31	25	1	30	1	33
Gu	Gullied land	11	VIIe-333	26	---	--	---	--

GUIDE TO MAPPING UNITS--CONTINUED

Map symbol	Mapping unit	Described on page	Capability unit		Woodland group		Wildlife group	
			Number	Page	Number	Page	Number	Page
HuB2	Hulett gravelly fine sandy loam, 2 to 6 percent slopes, eroded	12	IIe-32	22	1	30	1	33
HuC	Hulett gravelly fine sandy loam, 6 to 10 percent slopes	11	IIIe-32	23	1	30	1	33
HuC2	Hulett gravelly fine sandy loam, 6 to 10 percent slopes, eroded	12	IIIe-32	23	1	30	1	33
LgC	Louisa gravelly sandy loam, 6 to 10 percent slopes	13	IVe-33	24	3	31	2	33
LgD	Louisa gravelly sandy loam, 10 to 15 percent slopes	13	VIe-32	25	3	31	2	33
LgE	Louisa gravelly sandy loam, 15 to 40 percent slopes	13	VIIe-32	26	3	31	2	33
LoD	Louisa slaty loam, 10 to 15 percent slopes	13	VIe-32	25	3	31	2	33
LoE	Louisa slaty loam, 15 to 40 percent slopes	13	VIIe-32	26	3	31	2	33
LsC2	Louisa stony sandy clay loam, 6 to 10 percent slopes, eroded	12	VIs-31	25	4	32	2	33
LsD2	Louisa stony sandy clay loam, 10 to 15 percent slopes, eroded	12	VIIs-332	26	4	32	2	33
LsE2	Louisa stony sandy clay loam, 15 to 40 percent slopes, eroded	13	VIIs-332	26	4	32	2	33
LtD	Louisa stony sandy loam, 10 to 15 percent slopes	12	VIIs-31	26	3	31	2	33
LtE	Louisa stony sandy loam, 15 to 40 percent slopes	12	VIIs-31	26	3	31	2	33
LuC2	Louisburg stony sandy loam, 6 to 10 percent slopes, eroded	14	VIs-31	25	3	31	2	33
LuD2	Louisburg stony sandy loam, 10 to 25 percent slopes, eroded	14	VIs-31	25	3	31	2	33
MaB3	Madison gravelly clay loam, 2 to 6 percent slopes, severely eroded	15	IIIe-331	23	2	30	1	33
MaC3	Madison gravelly clay loam, 6 to 10 percent slopes, severely eroded	15	IVe-331	24	2	30	1	33
MaD3	Madison gravelly clay loam, 10 to 15 percent slopes, severely eroded	15	VIe-331	25	2	30	1	33
MaE3	Madison gravelly clay loam, 15 to 25 percent slopes, severely eroded	15	VIIe-331	25	2	30	1	33
MdB2	Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded	14	IIe-31	21	1	30	1	33
MdC2	Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded	14	IIIe-31	23	1	30	1	33
MdD2	Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded	14	IVe-31	24	1	30	1	33
MdE2	Madison gravelly fine sandy loam, 15 to 25 percent slopes, eroded	15	VIe-31	25	1	30	1	33
Mt	Mantachie fine sandy loam	16	IIIw-32	23	5	32	3	35
Oc	Ochlockonee fine sandy loam	16	IIw-32	22	5	32	3	35
Ok	Ochlockonee fine sandy loam, local alluvium	16	IIe-31	21	5	32	3	35
PcC3	Pacolet clay loam, 6 to 15 percent slopes, severely eroded	17	VIIe-331	25	2	30	1	33
PsC2	Pacolet sandy loam, 6 to 10 percent slopes, eroded	16	IVe-39	24	1	30	1	33
PsD2	Pacolet sandy loam, 10 to 15 percent slopes, eroded	17	VIe-32	25	1	30	1	33
PsE2	Pacolet sandy loam, 15 to 25 percent slopes, eroded	17	VIe-32	25	1	30	1	33
Ra	Roanoke silt loam	17	IVw-31	24	6	32	4	35
Ro	Rock land	17	VIIIs-39	26	---	--	2	33
Sr	Stony rough land	17	VIIs-31	26	---	--	2	33
Te	Terrace escarpment	17	VIIs-31	26	---	--	2	33
WdC3	Wedowee gravelly sandy clay loam, 6 to 10 percent slopes, severely eroded	18	VIe-331	25	2	30	1	33

GUIDE TO MAPPING UNITS--CONTINUED

Map symbol	Mapping unit	Described on page	Capability unit		Woodland group		Wildlife group	
			Number	Page	Number	Page	Number	Page
WdD3	Wedowee gravelly sandy clay loam, 10 to 15 percent slopes, severely eroded	18	VIe-331	25	2	30	1	33
WdE3	Wedowee gravelly sandy clay loam, 15 to 25 percent slopes, severely eroded	19	VIIe-331	25	2	30	1	33
WgC2	Wedowee gravelly sandy loam, 6 to 10 percent slopes, eroded	18	IVe-39	24	1	30	1	33
WgD2	Wedowee gravelly sandy loam, 10 to 15 percent slopes, eroded	18	VIe-32	25	1	30	1	33
WgE2	Wedowee gravelly sandy loam, 15 to 25 percent slopes, eroded	18	VIe-32	25	1	30	1	33
Wh	Wehadkee fine sandy loam	19	IVw-31	24	6	32	4	35
Wk	Wehadkee and Mantachie soils	19	IVw-31	24	6	32	4	35
WmB2	Wickham fine sandy loam, 2 to 6 percent slopes, eroded	19	IIe-31	21	1	30	1	33
WmC2	Wickham fine sandy loam, 6 to 10 percent slopes, eroded	19	IIIe-31	23	1	30	1	33
WmD2	Wickham fine sandy loam, 10 to 15 percent slopes, eroded	20	IVe-31	24	1	30	1	33
WnC2	Wickham gravelly fine sandy loam, 6 to 10 percent slopes, eroded	20	IIIe-31	23	1	30	1	33
WnD2	Wickham gravelly fine sandy loam, 10 to 15 percent slopes, eroded	20	IVe-31	24	1	30	1	33
WsC2	Wilkes sandy loam, 6 to 10 percent slopes, eroded	20	VIs-31	25	3	31	2	33
WtD2	Wilkes stony sandy loam, 10 to 15 percent slopes, eroded	20	VIIs-31	26	3	31	2	33

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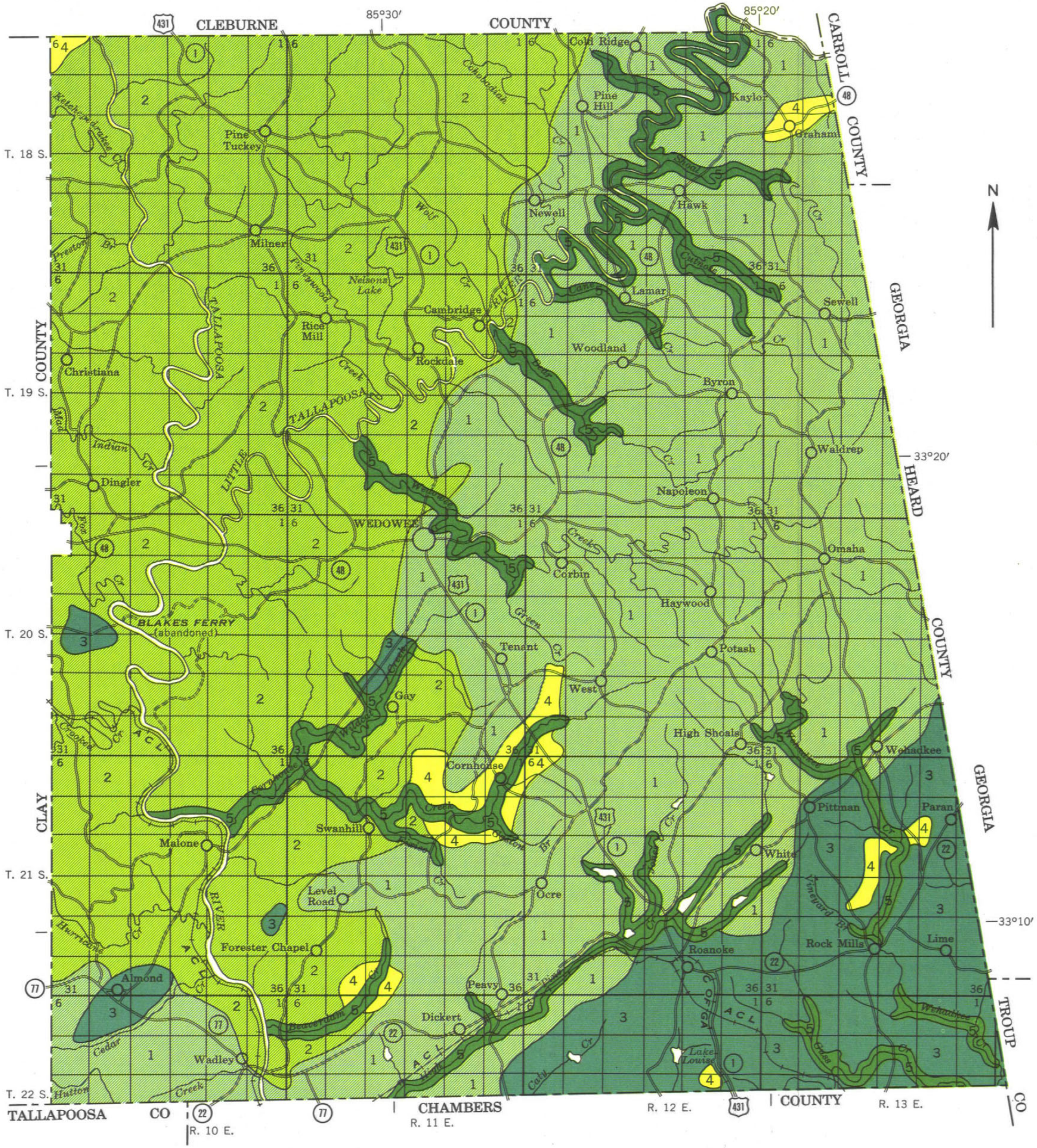


U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ALABAMA AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP
RANDOLPH COUNTY, ALABAMA

SCALE IN MILES

1 0 1 2 3 4

SOIL ASSOCIATIONS

1 Madison-Louisa association: Moderately deep or shallow, well-drained soils that formed over schist on broad and narrow ridges

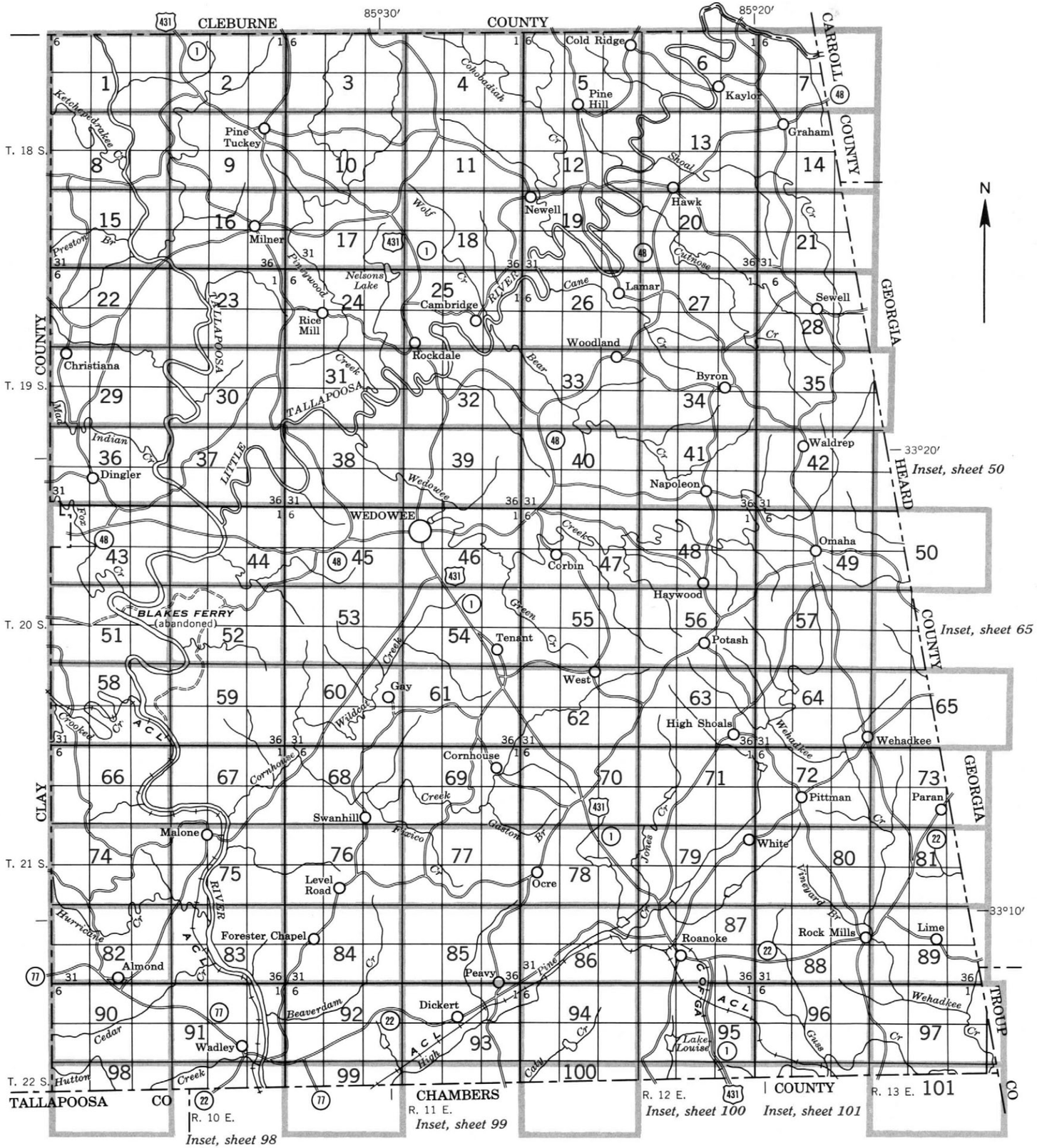
2 Louisa-Madison association: Shallow or moderately deep, well-drained soils that formed over schist on narrow, sloping ridgetops and steep slopes

3 Appling-Cecil-Louisburg association: Moderately deep, deep, and shallow, well-drained soils that formed over granite on broad ridges

4 Davidson-Wilkes association: Deep and shallow, well-drained, red, clayey soils that formed over basic and acidic rocks on broad and narrow ridges

5 Mantachie-Ochlockonee association: Deep, well-drained to somewhat poorly drained soils on flood plains

December 1966



INDEX TO MAP SHEETS
RANDOLPH COUNTY, ALABAMA

SCALE IN MILES

1 0 1 2 3 4

Original text from map sheets:
"This map is one of a set compiled in 1966 as part of a soil survey by the Soil Conservation Service, United States Department of Agriculture, Alabama Department of Agriculture and industries, and the Alabama Agricultural Experiment Station. Range, township, and section corners shown on this map are indefinite."

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

RANDOLPH COUNTY, ALABAMA

ALABAMA AGRICULTURAL EXPERIMENT STATION
ALABAMA DEPARTMENT OF AGRICULTURE AND INDUSTRIES

SOIL LEGEND

The first capital letter is the initial one of the soil name. A second capital letter shows the slope. Most symbols without a slope letter are for nearly level soils, but some are for soils or land types that have a considerable range in slope. The final number, 2 or 3, in the symbol shows that the soil is eroded or severely eroded.

SYMBOL	NAME
AaA	Altavista fine sandy loam, 0 to 2 percent slopes
AaB	Altavista fine sandy loam, 2 to 6 percent slopes
AgB	Altavista gravelly fine sandy loam, 2 to 6 percent slopes
AgC2	Altavista gravelly fine sandy loam, 6 to 10 percent slopes, eroded
AlB2	Appling gravelly sandy loam, 2 to 6 percent slopes, eroded
AlC2	Appling gravelly sandy loam, 6 to 10 percent slopes, eroded
ApB2	Appling sandy loam, 2 to 6 percent slopes, eroded
ApC2	Appling sandy loam, 6 to 10 percent slopes, eroded
AuA	Augusta fine sandy loam, 0 to 2 percent slopes
AuB	Augusta fine sandy loam, 2 to 6 percent slopes
Bu	Buncombe loamy sand
CeB3	Cecil gravelly clay loam, 2 to 6 percent slopes, severely eroded
CeC3	Cecil gravelly clay loam, 6 to 10 percent slopes, severely eroded
CeD3	Cecil gravelly clay loam, 10 to 15 percent slopes, severely eroded
CeE3	Cecil gravelly clay loam, 15 to 25 percent slopes, severely eroded
CgB2	Cecil gravelly sandy loam, 2 to 6 percent slopes, eroded
CgC2	Cecil gravelly sandy loam, 6 to 10 percent slopes, eroded
CgD2	Cecil gravelly sandy loam, 10 to 15 percent slopes, eroded
Cm	Cecil–Madison–Urban land complex
Cn	Chewacla silt loam
Co	Congaree silt loam
DaB3	Davidson gravelly clay loam, 2 to 6 percent slopes, severely eroded
DaC3	Davidson gravelly clay loam, 6 to 10 percent slopes, severely eroded
DaD3	Davidson gravelly clay loam, 10 to 15 percent slopes, severely eroded
DgB2	Davidson gravelly sandy loam, 2 to 6 percent slopes, eroded
DgC2	Davidson gravelly sandy loam, 6 to 10 percent slopes, eroded
DgD2	Davidson gravelly sandy loam, 10 to 15 percent slopes, eroded
DgE2	Davidson gravelly sandy loam, 15 to 25 percent slopes, eroded
Gu	Gullied land
HuB2	Hulett gravelly fine sandy loam, 2 to 6 percent slopes, eroded
HuC	Hulett gravelly fine sandy loam, 6 to 10 percent slopes
HuC2	Hulett gravelly fine sandy loam, 6 to 10 percent slopes, eroded
LgC	Louisa gravelly sandy loam, 6 to 10 percent slopes
LgD	Louisa gravelly sandy loam, 10 to 15 percent slopes
LgE	Louisa gravelly sandy loam, 15 to 40 percent slopes
LoD	Louisa slaty loam, 10 to 15 percent slopes
LoE	Louisa slaty loam, 15 to 40 percent slopes
LsC2	Louisa stony sandy clay loam, 6 to 10 percent slopes, eroded
LsD2	Louisa stony sandy clay loam, 10 to 15 percent slopes, eroded
LsE2	Louisa stony sandy clay loam, 15 to 40 percent slopes, eroded
LtD	Louisa stony sandy loam, 10 to 15 percent slopes
LtE	Louisa stony sandy loam, 15 to 40 percent slopes
LuC2	Louisburg stony sandy loam, 6 to 10 percent slopes, eroded
LuD2	Louisburg stony sandy loam, 10 to 25 percent slopes, eroded
MaB3	Madison gravelly clay loam, 2 to 6 percent slopes, severely eroded
MaC3	Madison gravelly clay loam, 6 to 10 percent slopes, severely eroded
MaD3	Madison gravelly clay loam, 10 to 15 percent slopes, severely eroded
MaE3	Madison gravelly clay loam, 15 to 25 percent slopes, severely eroded
MdB2	Madison gravelly fine sandy loam, 2 to 6 percent slopes, eroded
MdC2	Madison gravelly fine sandy loam, 6 to 10 percent slopes, eroded
MdD2	Madison gravelly fine sandy loam, 10 to 15 percent slopes, eroded
MdE2	Madison gravelly fine sandy loam, 15 to 25 percent slopes, eroded
Mt	Mantachie fine sandy loam
Oc	Ochlockonee fine sandy loam
Ok	Ochlockonee fine sandy loam, local alluvium
PcC3	Pacolet clay loam, 6 to 15 percent slopes, severely eroded
PsC2	Pacolet sandy loam, 6 to 10 percent slopes, eroded
PsD2	Pacolet sandy loam, 10 to 15 percent slopes, eroded
PsE2	Pacolet sandy loam, 15 to 25 percent slopes, eroded
Ra	Roanoke silt loam
Ro	Rock land
Sr	Stony rough land
Te	Terrace escarpment
WdC3	Wedowee gravelly sandy clay loam, 6 to 10 percent slopes, severely eroded
WdD3	Wedowee gravelly sandy clay loam, 10 to 15 percent slopes, severely eroded
WdE3	Wedowee gravelly sandy clay loam, 15 to 25 percent slopes, severely eroded
WgC2	Wedowee gravelly sandy loam, 6 to 10 percent slopes, eroded
WgD2	Wedowee gravelly sandy loam, 10 to 15 percent slopes, eroded
WgE2	Wedowee gravelly sandy loam, 15 to 25 percent slopes, eroded
Wh	Wehadkee fine sandy loam
Wk	Wehadkee and Mantachie soils
WmB2	Wickham fine sandy loam, 2 to 6 percent slopes, eroded
WmC2	Wickham fine sandy loam, 6 to 10 percent slopes, eroded
WmD2	Wickham fine sandy loam, 10 to 15 percent slopes, eroded
WnC2	Wickham gravelly fine sandy loam, 6 to 10 percent slopes, eroded
WnD2	Wickham gravelly fine sandy loam, 10 to 15 percent slopes, eroded
WsC2	Wilkes sandy loam, 6 to 10 percent slopes, eroded
WtD2	Wilkes stony sandy loam, 10 to 15 percent slopes, eroded

CONVENTIONAL SIGNS

WORKS AND STRUCTURES

Highways and roads
- Dual
- Good motor
- Poor motor
- Trail

Highway markers
- National Interstate
- U. S.
- State or county

Railroads
- Single track
- Multiple track
- Abandoned

Bridges and crossings
- Road
- Trail, foot
- Railroad
- Ferry (FY)
- Ford
- Grade
- R. R. over
- R. R. under
- Tunnel

Buildings
- School
- Church
- Station

Mines and Quarries
- Mine dump
- Pits, gravel or other

Power line

Pipeline

Cemetery

Dams

Levee

Forest fire or lookout station

Sawmill

BOUNDARIES

- National or state
- County
- Township or range, U. S.
- Section line, corner, U. S.
- Reservation
- Land grant
- Small park, cemetery, airport

DRAINAGE

Streams, double-line
- Perennial
- Intermittent

Streams, single-line
- Perennial
- Intermittent
- Crossable with tillage implements
- Not crossable with tillage implements
- Unclassified

Canals and ditches (CANAL)

Lakes and ponds
- Perennial
- Intermittent

Wells, water (flowing)

Spring

Marsh or swamp

Wet spot

Alluvial fan

Drainage end

RELIEF

Escarpments
- Bedrock
- Other

Prominent peak

Depressions

	Large	Small
Crossable with tillage implements		
Not crossable with tillage implements		
Contains water most of the time		

SOIL SURVEY DATA

- Soil boundary and symbol (Dx)
- Gravel
- Stony, very stony
- Rock outcrops
- Chert fragments
- Clay spot
- Sand spot
- Gumbo or scabby spot
- Made land
- Severely eroded spot
- Blowout, wind erosion
- Gully

Soil map constructed 1966 by Cartographic Division, Soil Conservation Service, USDA, from 1964 aerial photographs. Controlled mosaic based on Alabama plane coordinate system, east zone, transverse Mercator projection, 1927 North American datum.

CLEBURNE COUNTY

CLAY COUNTY

R. 10 E.

T. 18 S.

N

TALLAPOOSA RIVER

KETCHEPEDRAKEE CREEK

(Joins sheet 2)

(Joins sheet 8)

0 ½ Mile

Scale 1:15840

0 3000 Feet

N

R. 10 E.

CLEBURNE COUNTY

T. 18 S.

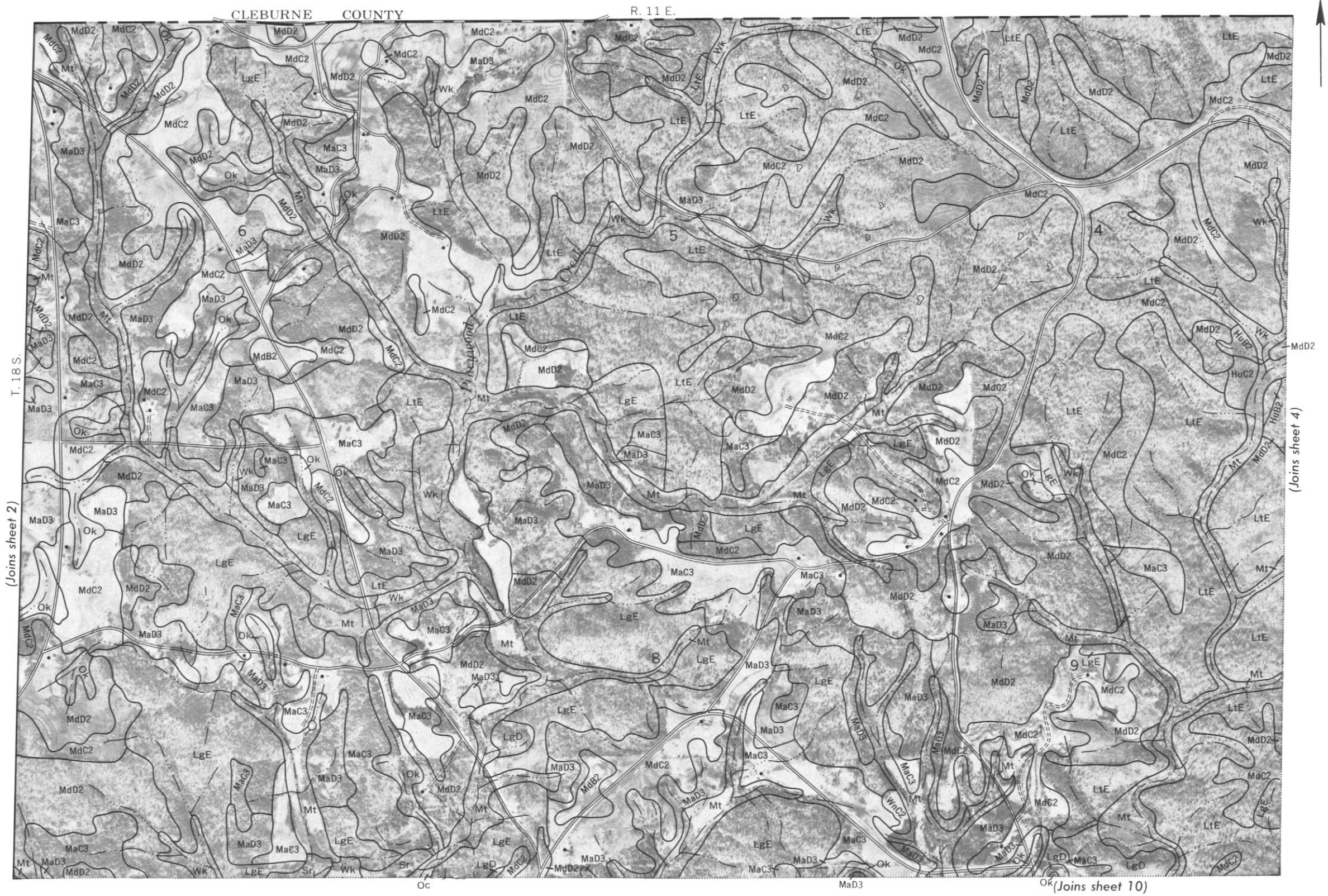
(Joins sheet 1)

(Joins sheet 3)

(Joins sheet 9)

0 ½ Mile Scale 1:15840 0 3000 Feet

RANDOLPH COUNTY, ALABAMA — SHEET NUMBER 3



0 ½ Mile Scale 1:15840 0 3000 Feet

4

N

CLEBURNE COUNTY

R. 11 E.

T. 18 S.

Cool Springs Church

Cohobadiah Creek

(Joins sheet 3)

(Joins sheet 5)

(Joins sheet 11)

0 ½ Mile

Scale 1:15840

0 3000 Feet

CLEBURNE COUNTY

R. 12 E.

T. 18 S.

N

Cold Ridge Church

Cold Ridge

Knakes

Cohobadiah

Pine Hill

Creek

(Joins sheet 4)

(Joins sheet 6)

(Joins sheet 12)

0 ½ Mile

Scale 1:15840

0 3000 Feet

N

CLEBURNE COUNTY

R. 12 E.

T. 18 S.

(Joins inset sheet 7)

(Joins sheet 5)

(Joins sheet 7)

(Joins sheet 13)

LITTLE TALLAPOOSA RIVER

Kaylor

GRAVEL PIT

Kendrick Creek

0 ½ Mile Scale 1:15840 0 3000 Feet


N
R. 13 E.
R. 12 E.
T. 18 S.
T. 17 S.
LITTLE TALLAPOOSA RIVER
CLEBURNE COUNTY
CARROLL COUNTY
GEORGIA
(Joins sheet 6)
(Joins sheet 14)
(Joins sheet 6)
Scale 1:15840
0
½ Mile
0
3000 Feet

N

(Joins sheet 1)

R. 10 E.

T. 18 S.

CLAY COUNTY

KITCHEPEDRAKEE CREEK

TALLAPOOSA RIVER

Center West Church

18 17 16 19 20 21

(Joins sheet 9)

(Joins sheet 15)

0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

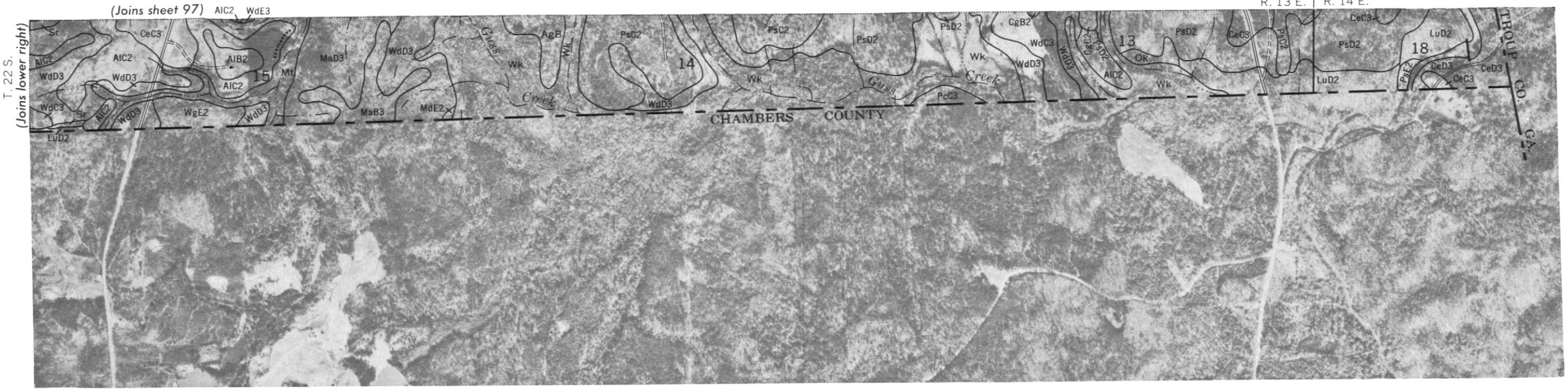
(10)

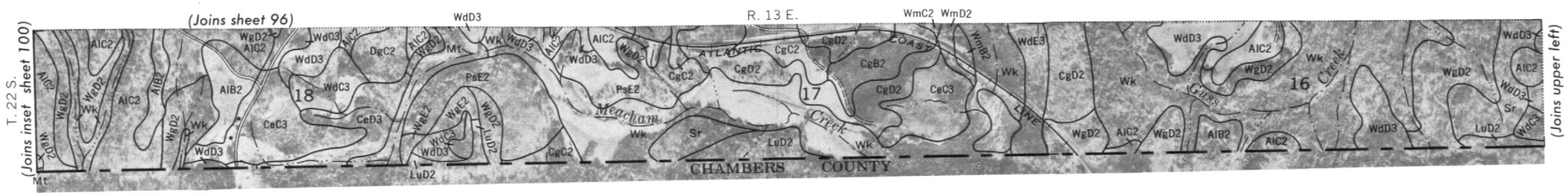
N

0 ½ Mile Scale 1:15840 0 3000 Feet

100

0 ½ Mile Scale 1:15840 0 3000 Feet

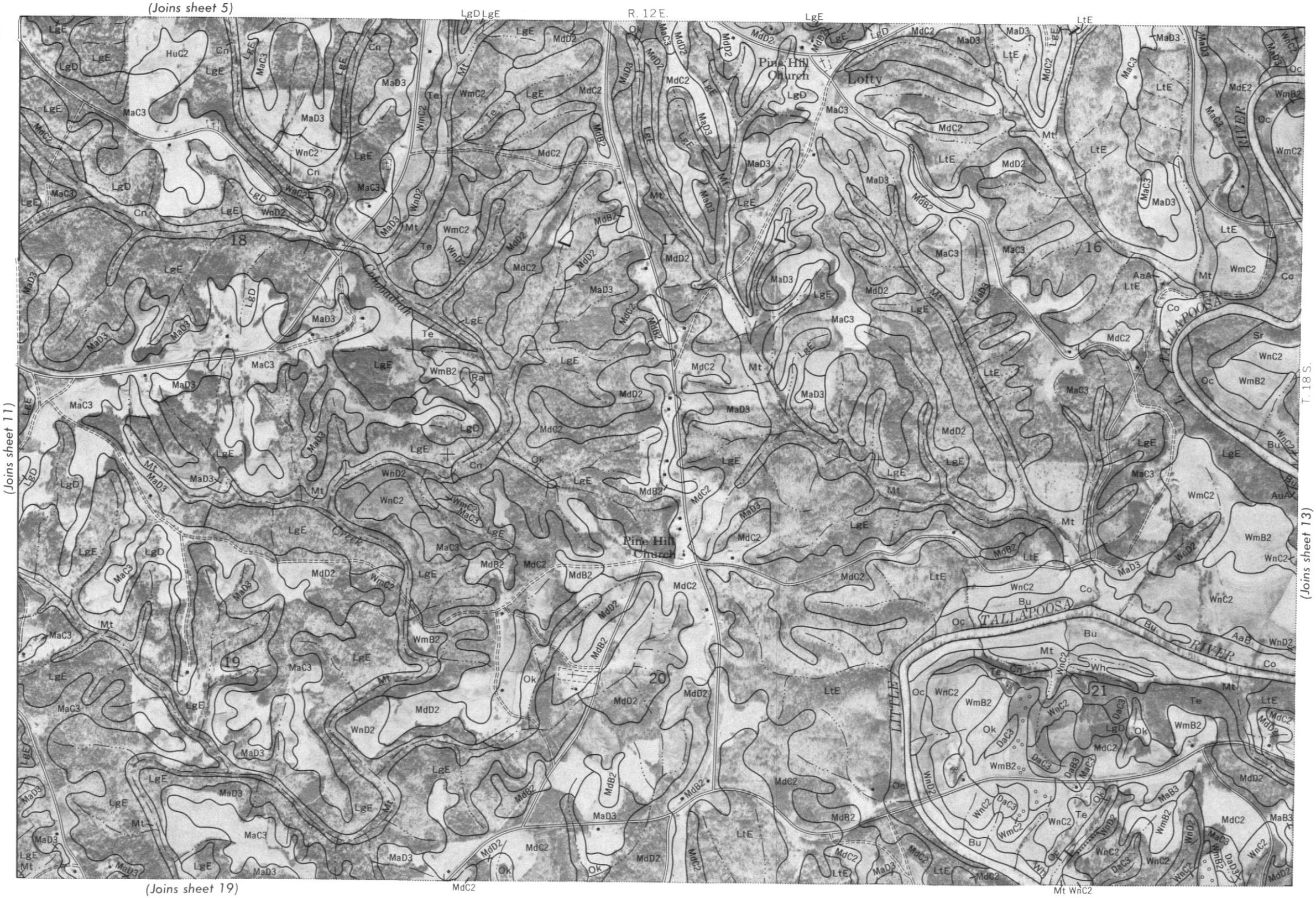




0 ½ Mile Scale 1:15840 0 3000 Feet


(Joins sheet 4)
R. 11 E.
N
T. 18 S.
(Joins sheet 10)
(Joins sheet 12)
(Joins sheet 18)
Smyrna Church
13
14
15
22
23
24
0
½ Mile
Scale 1:15840
0
3000 Feet

(12)



0 ½ Mile Scale 1:15840 0 3000 Feet


R. 12 E.
(Joins sheet 6)
N
T. 18 S.
(Joins sheet 12)
(Joins sheet 14)
(Joins sheet 20)
Bethena Church
Hawk
Shoal Creek
LITTLE
TALLAPOOSA RIVER
13
14
15
22
23
24
0
½ Mile
Scale 1:15840
0
3000 Feet

(14)

N

(Joins sheet 7)

R. 13 E.

(Joins sheet 13)

(Joins sheet 21)

Graham

Shiloh Church

St James Church

Shoal Creek

17

18

19

20

21

T. 18 S.

CARROLL COUNTY

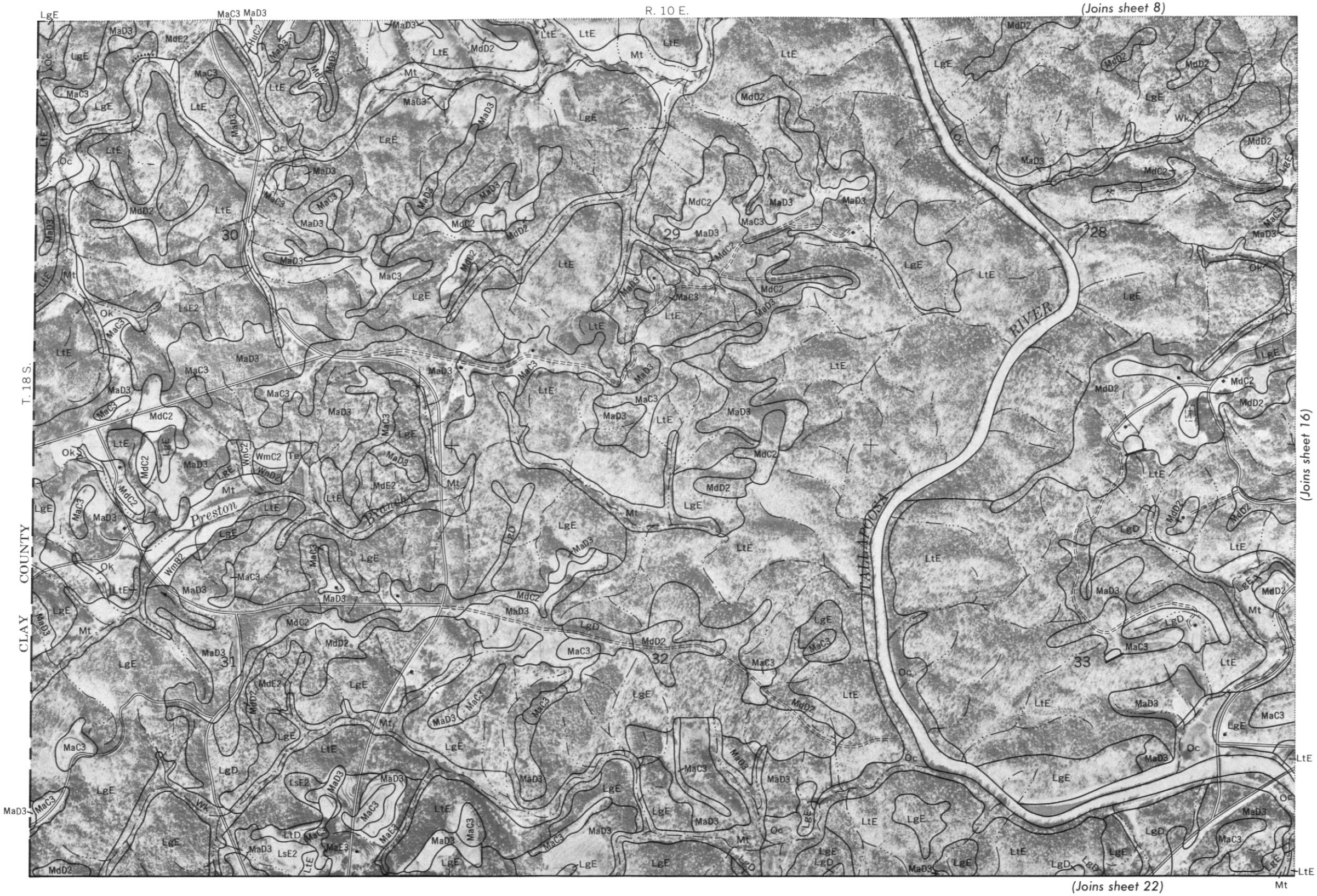
GEORGIA

HEARD COUNTY

0 ½ Mile

Scale 1:15840

0 3000 Feet


R. 10 E.
(Joins sheet 8)
N
T. 18 S.
CLAY COUNTY
Preston
Brunch
RIVER
TALLAPOOSA
30
29
28
31
32
33
(Joins sheet 16)
(Joins sheet 22)
0
½ Mile
Scale 1:15840
0
3000 Feet

16

N

(Joins sheet 9)

R. 10 E.

T. 18 S.

(Joins sheet 15)

(Joins sheet 17)

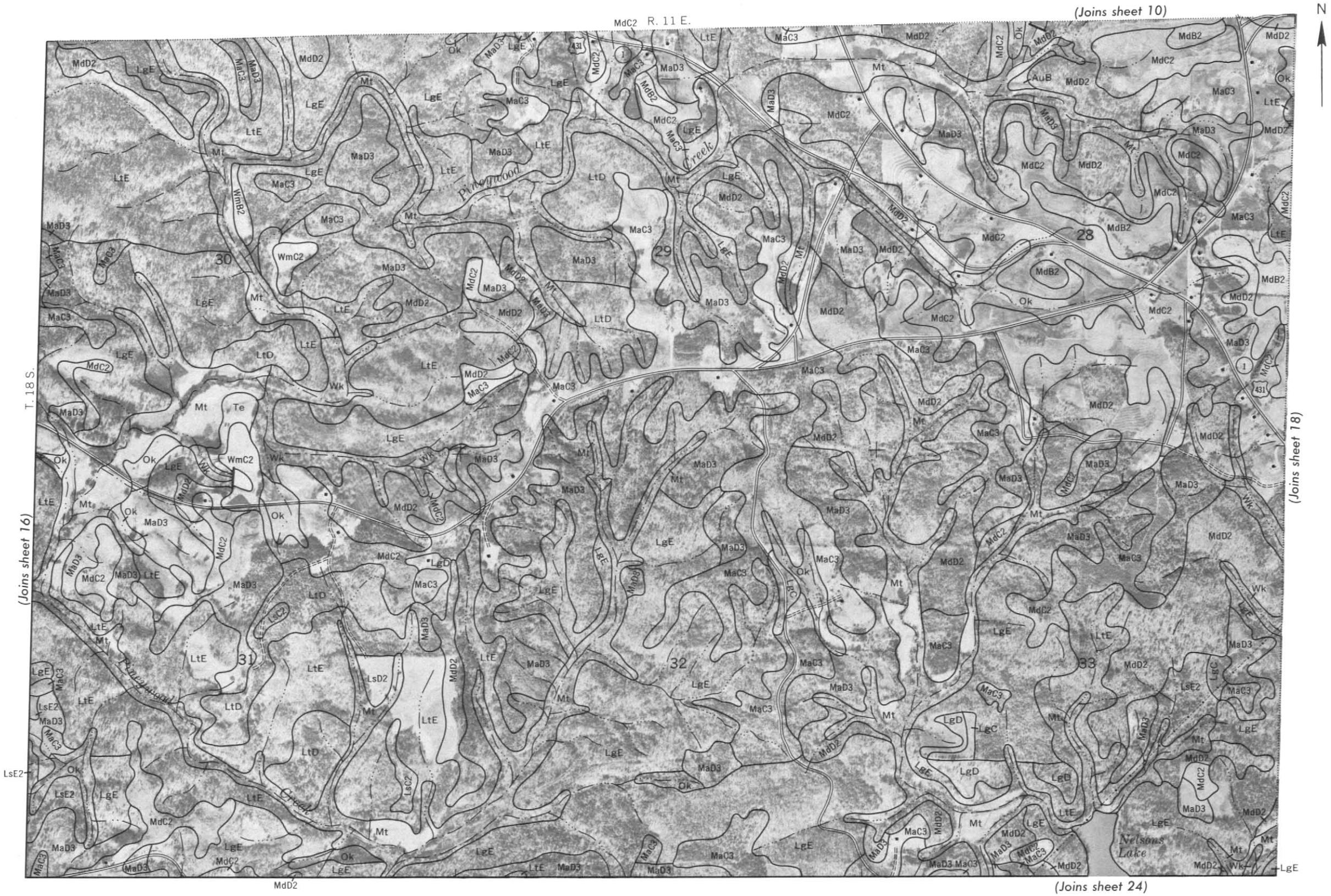
(Joins sheet 23)

Milner

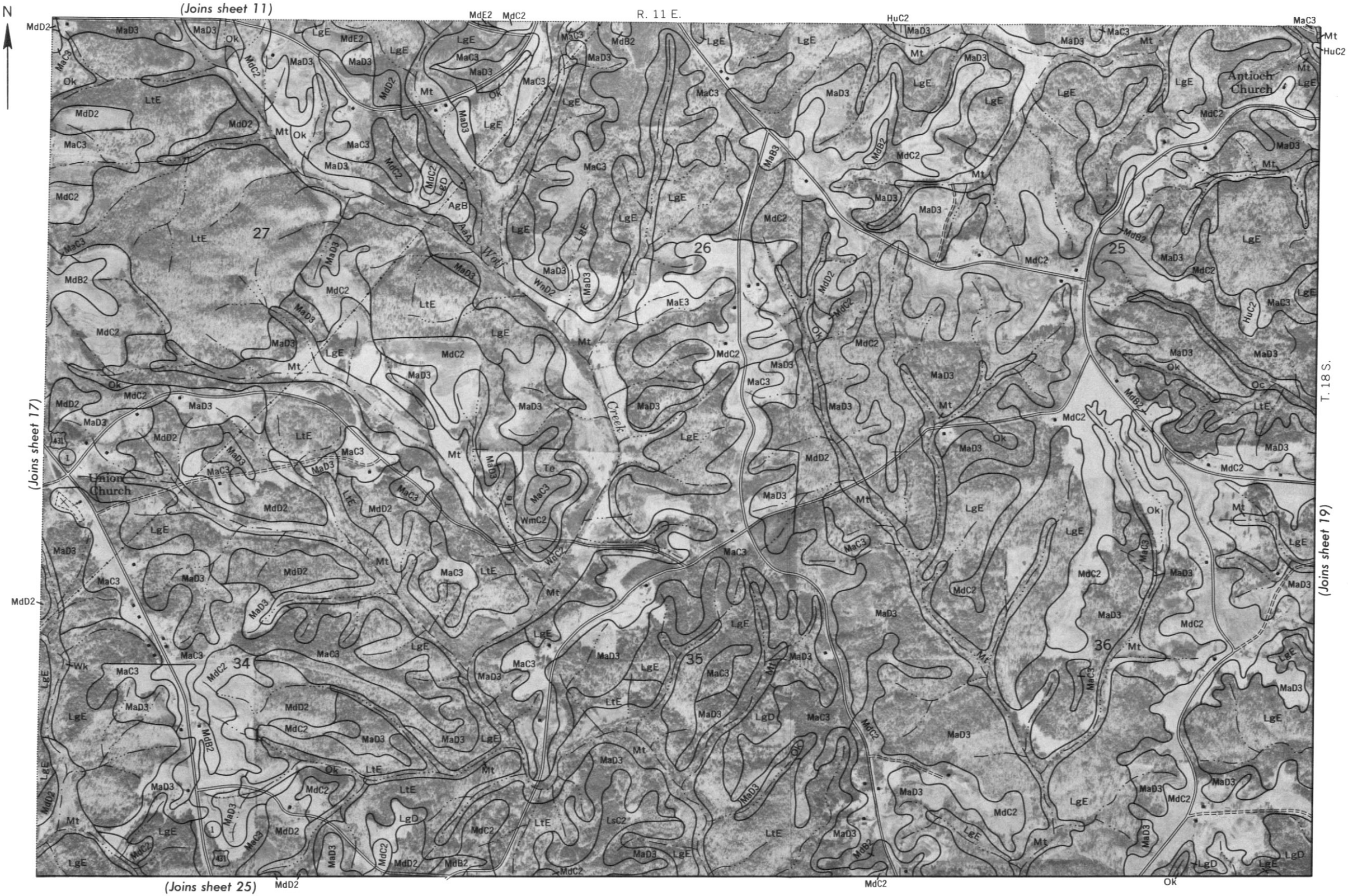
New Home Church

Zion Church

0 ½ Mile Scale 1:15840 0 3000 Feet


(Joins sheet 10)
R. 11 E.
N
T. 18 S.
(Joins sheet 16)
(Joins sheet 18)
(Joins sheet 24)
Pinewood Creek
Nelsons Lake
28
29
30
31
32
33
MdD2
MaC3
MaD3
LgE
LtE
Mt
Ok
MdC2
MdB2
LgD
LgC
LtD
LsD2
LsC2
LsE2
WmC2
WmB2
Wk
Te
AuB
0
½ Mile
Scale 1:15840
0
3000 Feet

(18)


N
(Joins sheet 11)
R. 11 E.
T. 18 S.
(Joins sheet 17)
(Joins sheet 19)
(Joins sheet 25)
Union Church
Antioch Church
Creek
27
26
25
34
35
36
MdD2
MaD3
MaC3
Ok
LtE
MdC2
Mt
LgE
MdE2
MaE3
MdB2
MaB3
HuC2
AgB
LgD
WnD2
WmC2
LsC2
Te
Wk
431
0
½ Mile
Scale 1:15840
0
3000 Feet


R. 12 E.
T. 18 S.
N
Newell
Cobbadidah Creek
LITTLE TALLAPOOSA RIVER
GRAVEL PIT
30
29
28
31
32
33
(Joins sheet 12)
(Joins sheet 18)
(Joins sheet 20)
(Joins sheet 26)
0 ½ Mile
Scale 1:15840
0 3000 Feet


N
(Joins sheet 13)
R. 12 E.
T. 18 S.
(Joins sheet 19)
(Joins sheet 21)
(Joins sheet 27)
Herren Grove Church
Cutmore
Creek
25
26
27
34
35
36
MdD2
MaD3
MaC3
LgE
LgD
MdC2
MdB2
Mt
Te
WmB2
AuA
AaB
AaA
Wh
Oc
Ok
Wk
LtE
MaB3
WnD2
WgD2
LsD2
0
½ Mile
Scale 1:15840
0
3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

N

(Joins sheet 15)

R. 10 E.

T. 19 S.

COUNTY

CLAY

(Joins sheet 23)

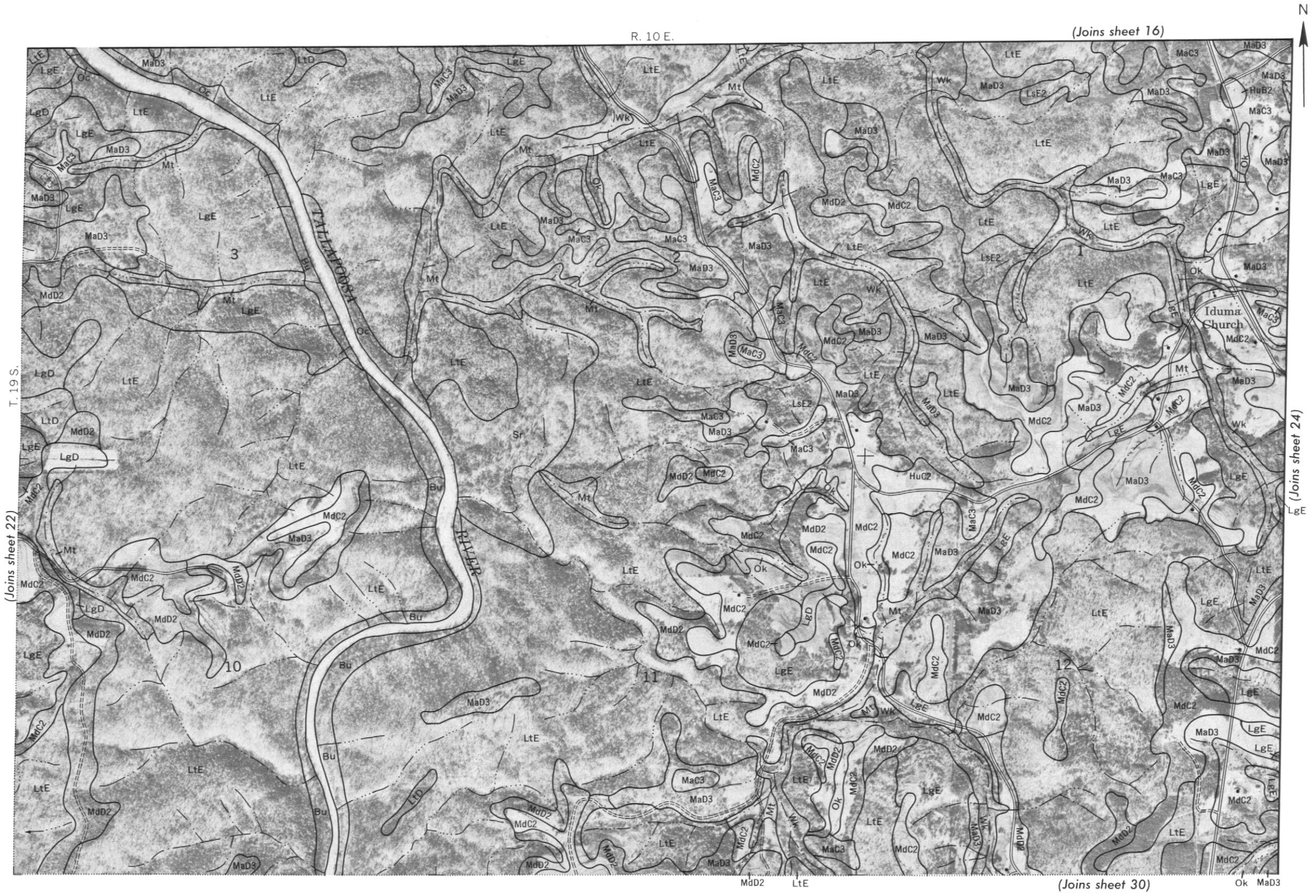
(Joins sheet 29)

Wesley Church

0 ½ Mile

Scale 1:15840

0 3000 Feet


N
R. 10 E.
T. 19 S.
(Joins sheet 16)
(Joins sheet 22)
(Joins sheet 24)
(Joins sheet 30)
TALLAPOOSA RIVER
Iduma Church
1
2
3
10
11
12
LtE
LgE
LgD
LtD
MaD3
MaC3
MdD2
MdC2
LsE2
HuB2
HuC2
Wk
Mt
Ok
Oc
Bu
Sr
0
½ Mile
Scale 1:15840
0
3000 Feet

N

R. 11 E.

(Joins sheet 17)

(Joins sheet 23)

(Joins sheet 25)

T. 19 S.

431

(Joins sheet 31)

0 ½ Mile Scale 1:15840 0 3000 Feet


R. 11 E.
T. 19 S.
N
(Joins sheet 18)
(Joins sheet 24)
(Joins sheet 26)
(Joins sheet 32)
Caver Church
Levins Chapel
Rockdale
Cambridge
LITTLE TALLAPOOSA RIVER
TALLAPOOSA RIVER
Wolf Creek
Beaver Creek
Gut Creek
10
11
12
1
2
3
0
½ Mile
Scale 1:15840
0
3000 Feet

N

(Joins sheet 19)

R. 12 E.

T. 19 S.

(Joins sheet 25)

(Joins sheet 27)

(Joins sheet 33)

LITTLE TALLAPOOSA RIVER

TALLAPOOSA RIVER

Cane Creek

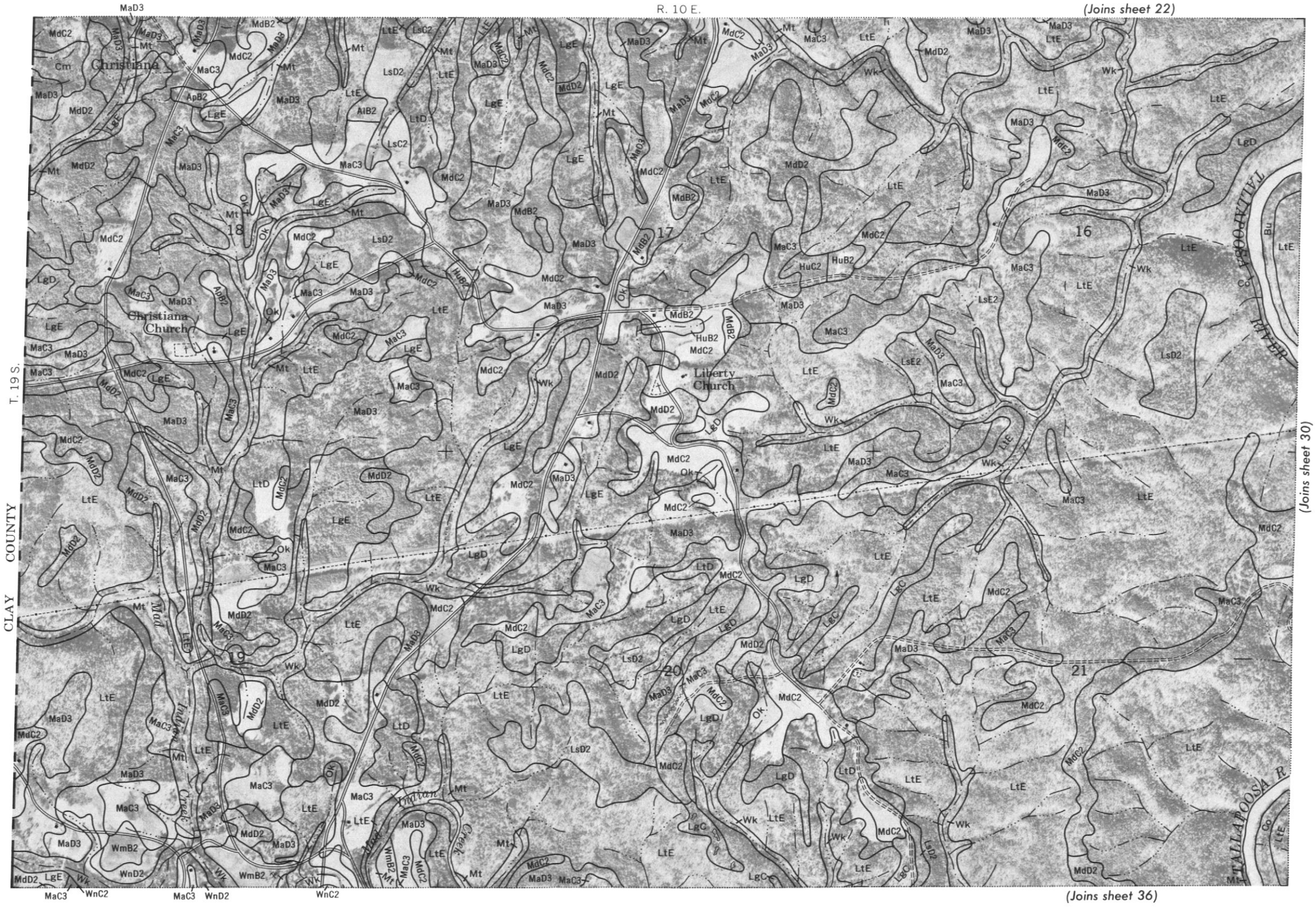
Lamar

Mt Carmel Church & School

0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet


N
(Joins sheet 21)
R. 13 E.
T. 19 S.
(Joins sheet 27)
(Joins sheet 35)
Bethel Church
Sewell
Cheaha Creek
HEARD COUNTY
GEORGIA
Scale 1:15840
0
½ Mile
0
3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

30

N

(Joins sheet 23)

R. 10 E.

T. 19 S.

(Joins sheet 29)

(Joins sheet 31)

(Joins sheet 37)

TALLAPOOSA RIVER

13 14 15 22 23 24

0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

(32)

N

0 ½ Mile Scale 1:15840 0 3000 Feet


N
R. 12 E.
(Joins sheet 26)
T. 19 S.
(Joins sheet 32)
(Joins sheet 34)
(Joins sheet 40)
Woodland
Woodland School
Bear Creek Church
Zion Church
Liberty Grove Church
BEAR CREEK
Bear Creek
17
18
19
20
21
16
WmB2
WnC2
MaD3
MaC3
MdD2
MdB2
MdC2
LgE
LgD
LtE
LtD
Oc
Mt
Ok
AgB
AgC2
AaB
Ra
Wk
WnC2
MdE2
LoD
LsD2
HuB2
Te
WmC2
0
½ Mile
Scale 1:15840
0
3000 Feet

34

N

(Joins sheet 27)

R. 12 E.

T. 19 S.

(Joins sheet 33)

(Joins sheet 35)

(Joins sheet 41)

Byron

Cane Creek

15 14 13 22 23 24

0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 13 E.

T. 19 S.

(Joins sheet 28)

(Joins sheet 34)

(Joins sheet 42)

(Joins inset sheet 50)

HEARD COUNTY

GEORGIA

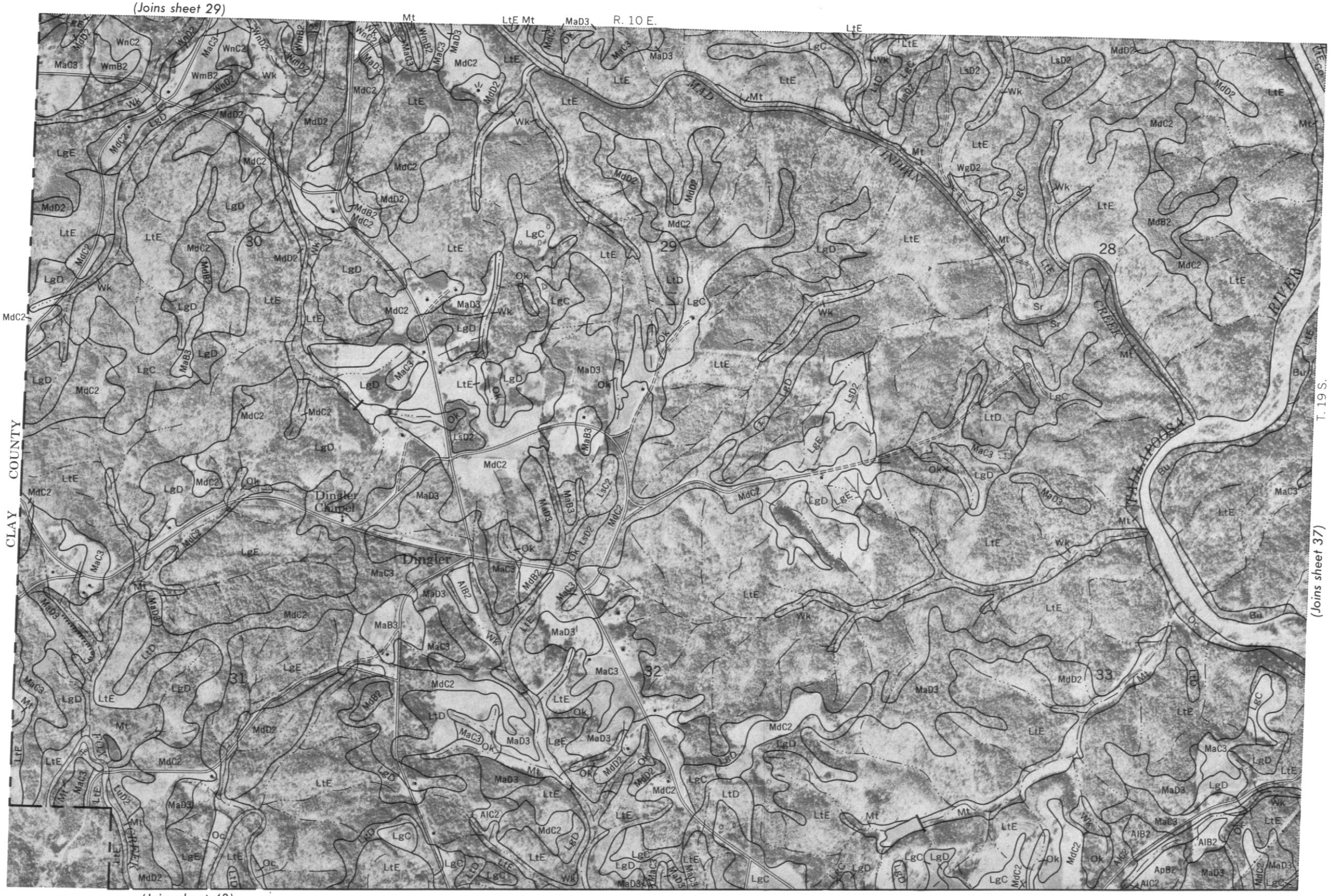
Gray Hill Church

18 17 16 19 20 21 22

0 ½ Mile

Scale 1:15840

0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

38

N

R. 11 E.

T. 19 S.

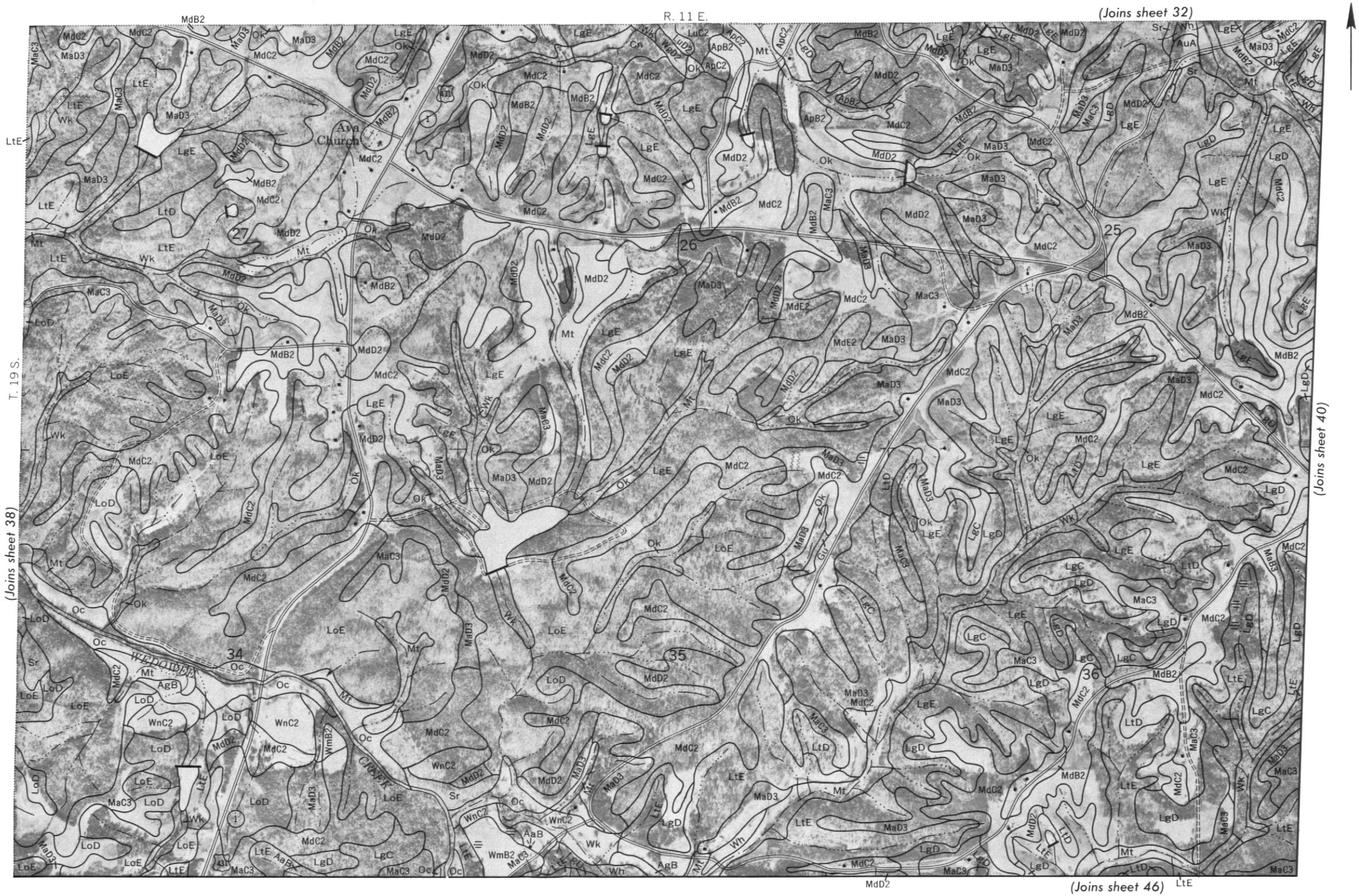
(Joins sheet 31)

(Joins sheet 37)

(Joins sheet 39)

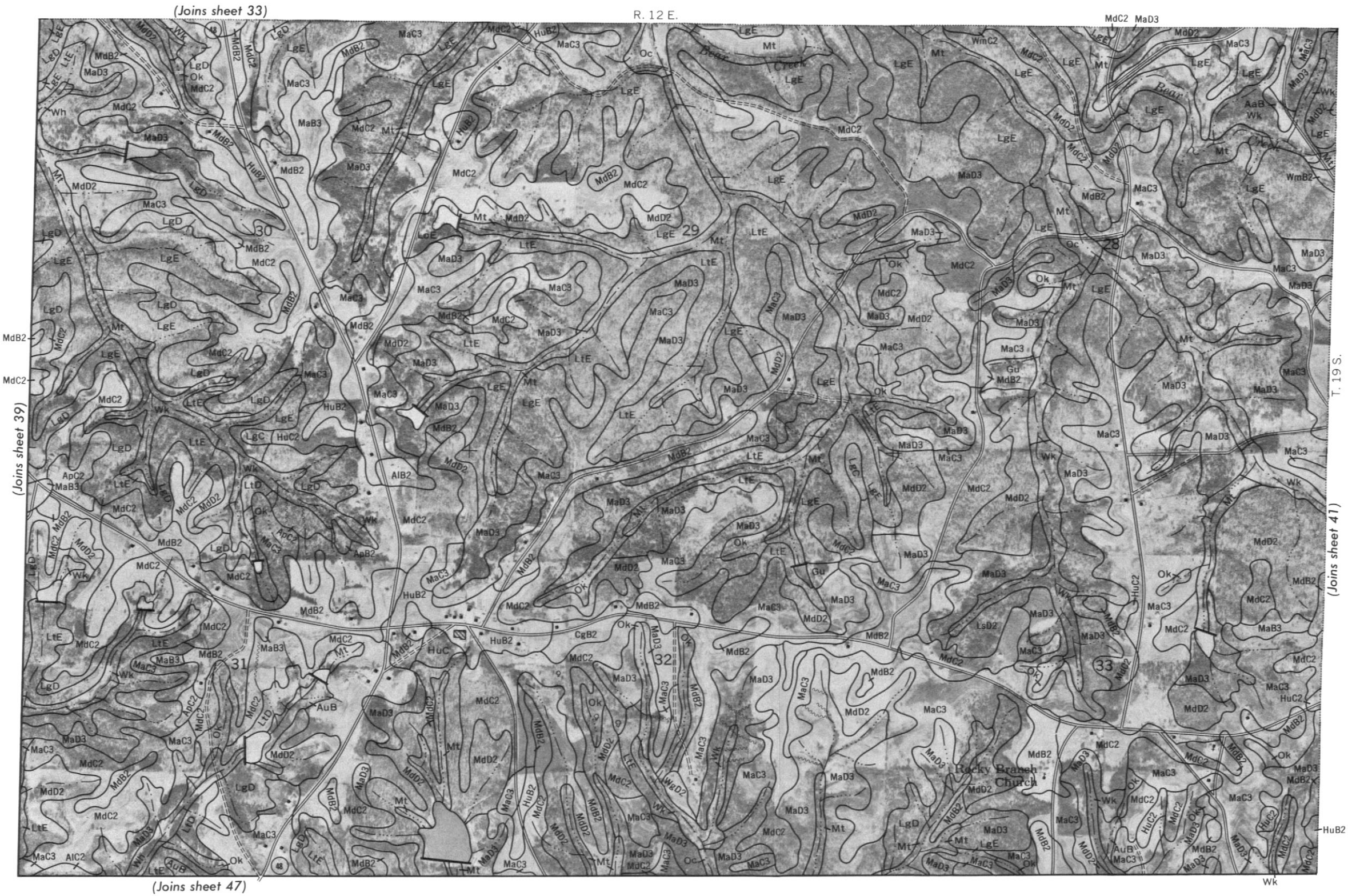
(Joins sheet 45)

0 ½ Mile Scale 1:15840 0 3000 Feet


N
R. 11 E.
T. 19 S.
(Joins sheet 32)
(Joins sheet 38)
(Joins sheet 40)
(Joins sheet 46)
Ava Church
WEDOWEE
CREEK
25
26
27
34
35
36
MdB2
MdC2
MdD2
MaD3
MaC3
LgE
LgD
LgC
LtE
LtD
LoE
LoD
Ok
Mt
Wk
Oc
WnC2
WmB2
MdE2
ApB2
ApC2
LuC2
LuD2
Cn
Gu
Wh
Sr
AuA
AgB
AaB
0
½ Mile
Scale 1:15840
0
3000 Feet

(40)

N



0 ½ Mile Scale 1:15840 0 3000 Feet


N
R. 12 E.
T. 19 S.
(Joins sheet 34)
(Joins sheet 40)
(Joins sheet 42)
(Joins sheet 48)
Napoleon
Napoleon School
Beaty Creek
Wedowee Creek
25
26
27
34
35
36
MaC3
MaD3
MdD2
MdC2
MdB2
MdE2
LgE
LgD
LgC
LtE
LsD2
Mt
Ok
Wk
HuC2
HuB2
WmB2
WmC2
WnC2
AgB
AuB
AaB
WgD2
DgD2
DgC2
DgB2
DaC3
Wh
Cn
0
½ Mile
Scale 1:15840
0
3000 Feet

N

(Joins sheet 35)

R. 13 E.

T. 19 S.

(Joins sheet 41)

(Joins inset sheet 50)

(Joins sheet 49)

Waldrep

Liberty East Church

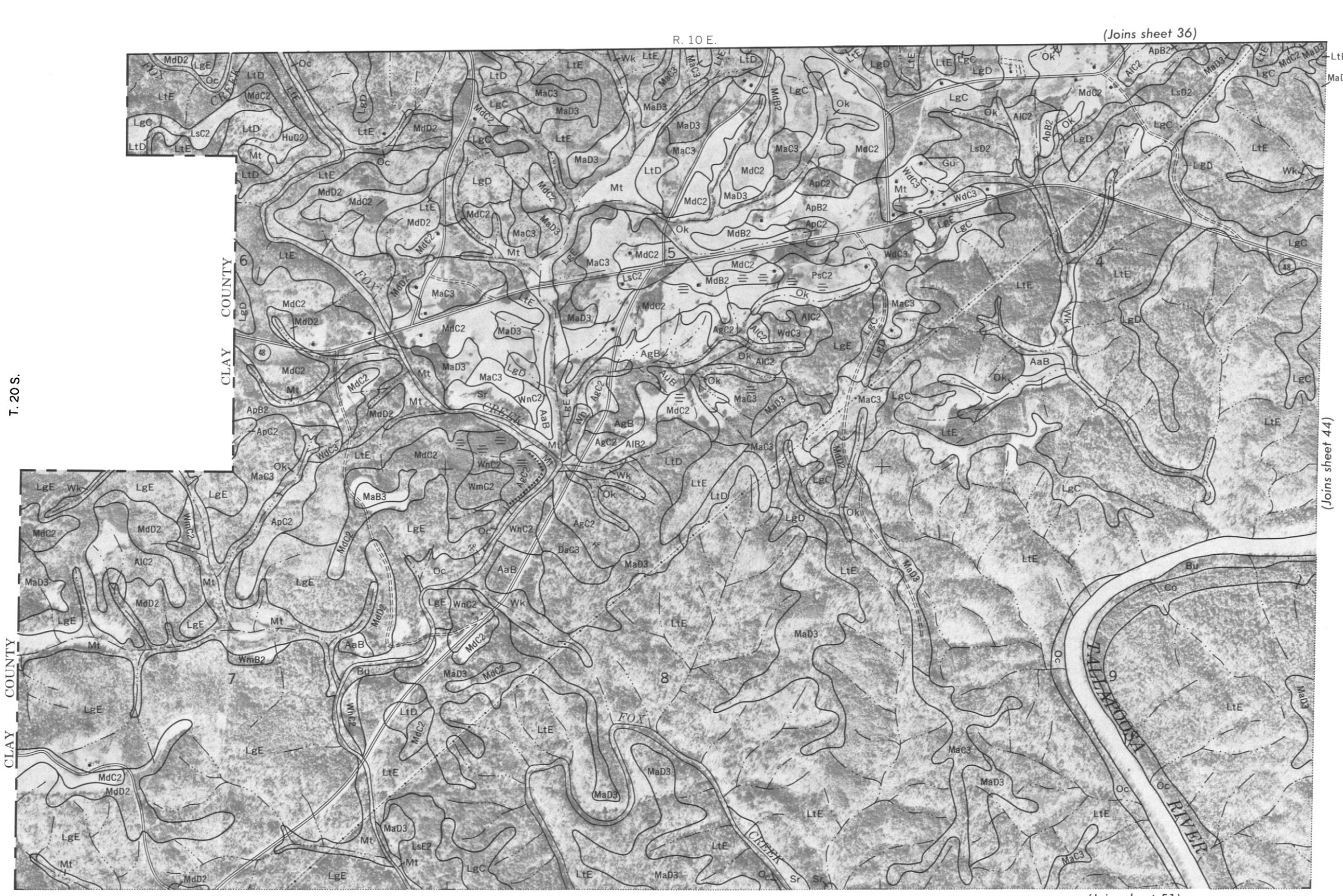
Flat Rock Church

28 29 30 31 32 33

0 ½ Mile

Scale 1:15840

0 3000 Feet


N
R. 10 E.
(Joins sheet 36)
(Joins sheet 44)
T. 20 S.
CLAY COUNTY
FOX CREEK
FOX
CREEK
TALLAPOOSA RIVER
(Joins sheet 51)
0
½ Mile
Scale 1:15840
0
3000 Feet

(44)

N

R. 10 E.

T. 20 S.

(Joins sheet 37)

(Joins sheet 43)

(Joins sheet 45)

(Joins sheet 52)

LITTLE TALLAPOOSA RIVER

TALLAPOOSA RIVER

Mt Grove Church

0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

N

(Joins sheet 39)

R. 11 E.

T. 20 S.

(Joins sheet 45)

(Joins sheet 47)

(Joins sheet 54)

WEDOWEE (county seat)

Randolph County School

Oc CREEK

WEDOWEE

Creek

0 ½ Mile

Scale 1:15840

0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

(48)

N

R. 12 E.

T. 20 S.

(Joins sheet 41)

(Joins sheet 47)

(Joins sheet 49)

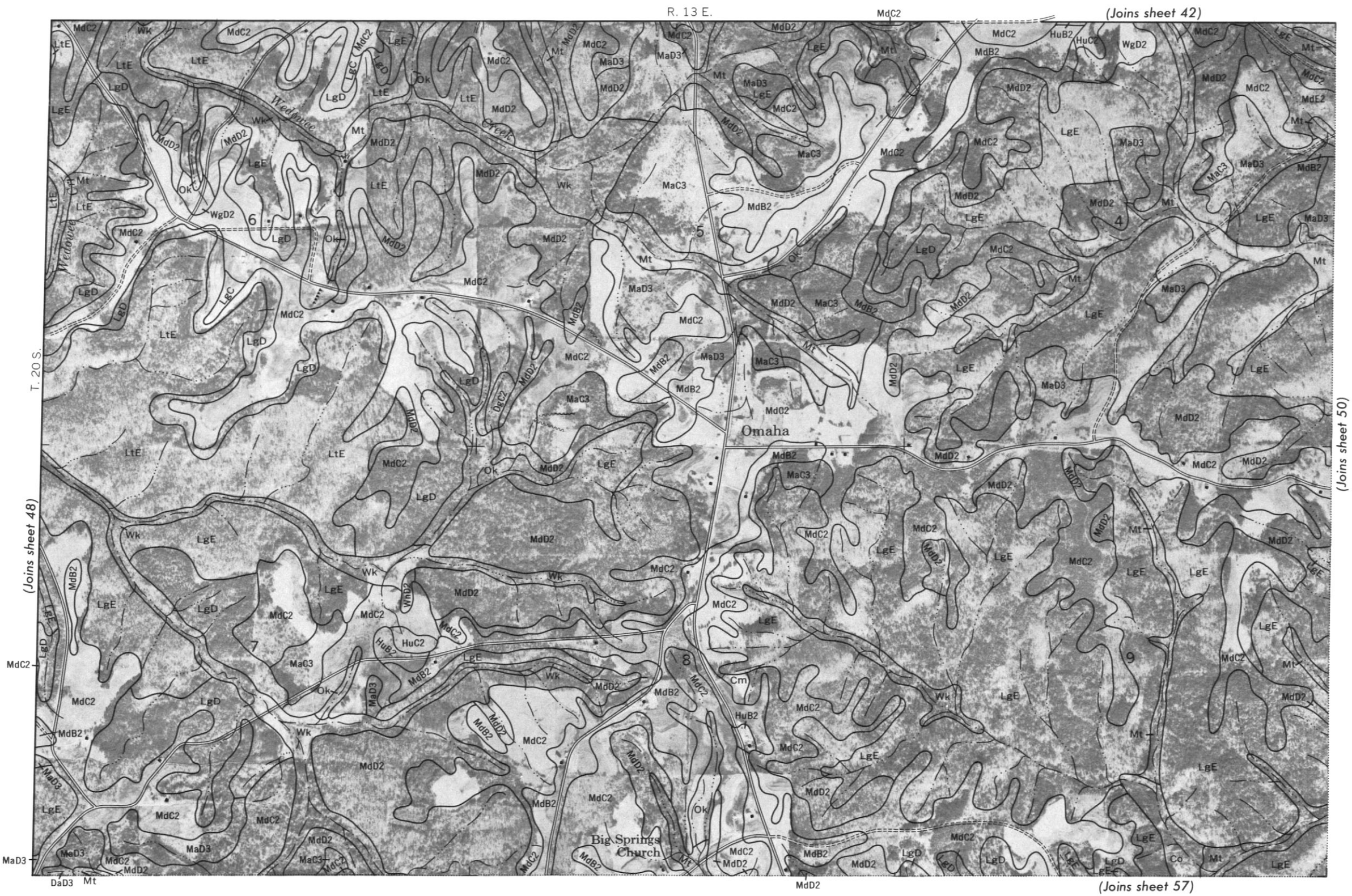
(Joins sheet 56)

Haywood

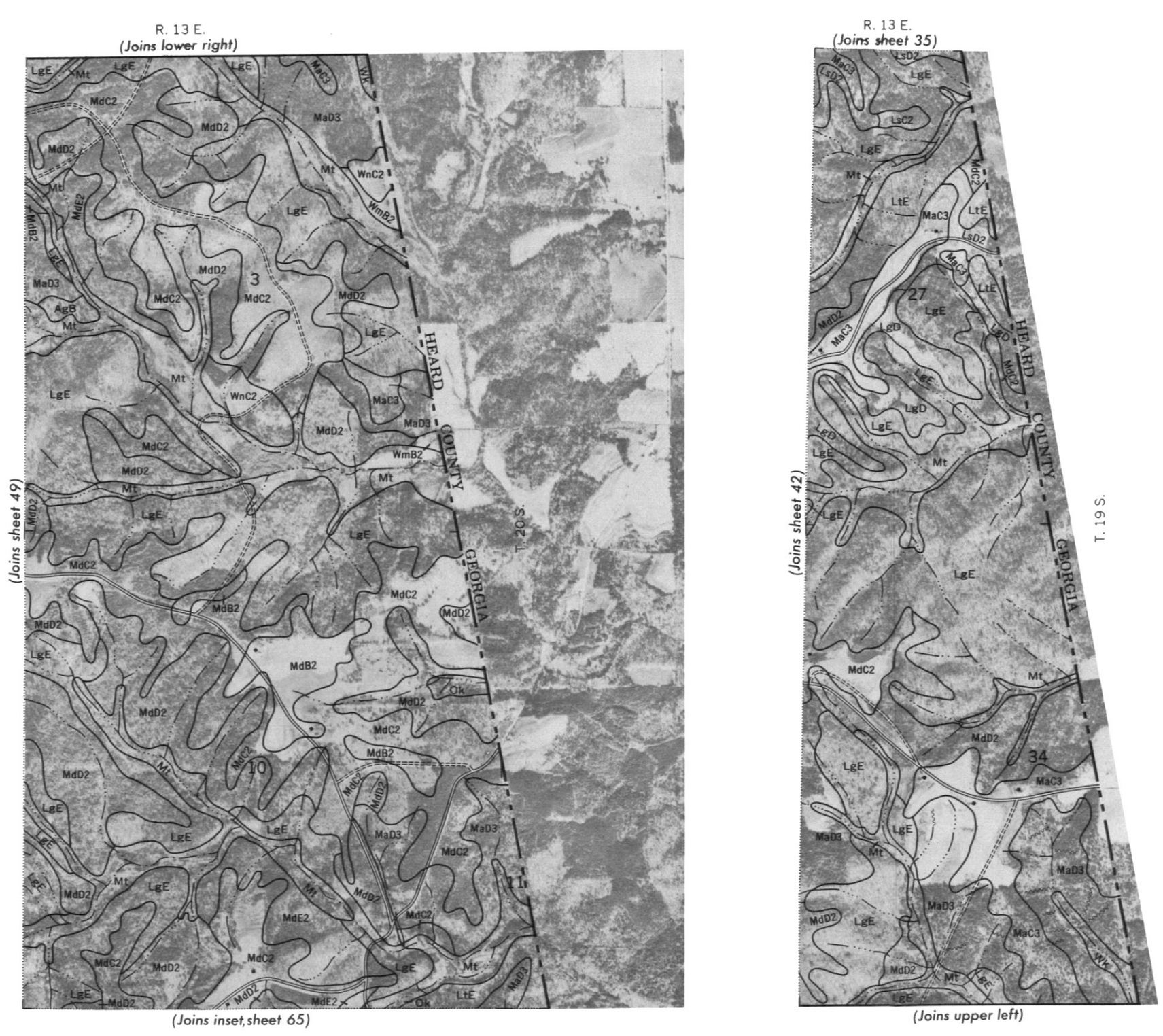
0 ½ Mile

Scale 1:15840

0 3000 Feet


N
R. 13 E.
T. 20 S.
(Joins sheet 42)
(Joins sheet 48)
(Joins sheet 50)
(Joins sheet 57)
Omaha
Big Springs Church
Wedowee Creek
Wedgmire Creek
0
½ Mile
Scale 1:15840
0
3000 Feet

(50)



0 ½ Mile Scale 1:15840 0 3000 Feet

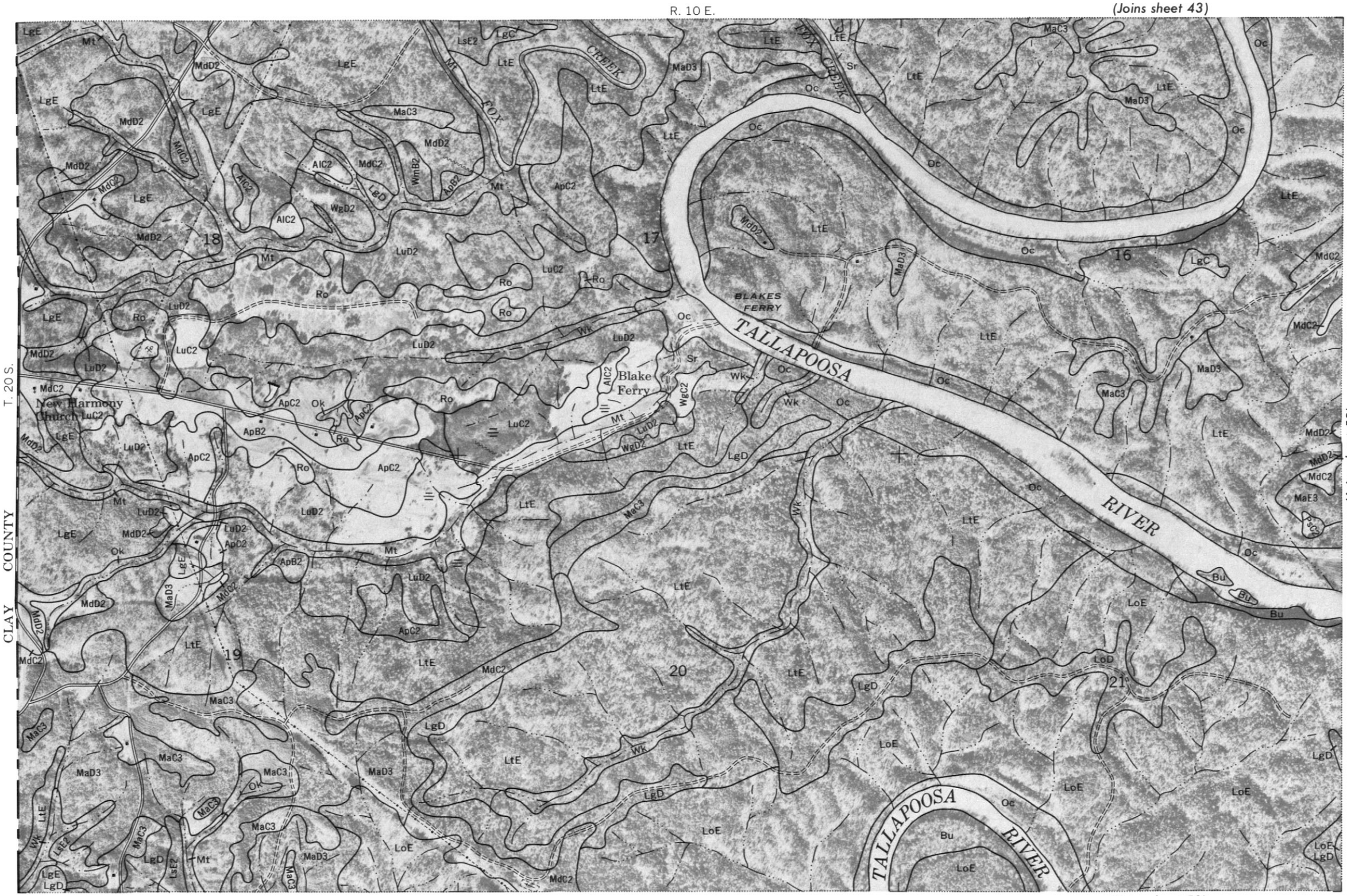
N

R. 10 E.

(Joins sheet 43)

T. 20 S.

CLAY COUNTY



(Joins sheet 52)

(Joins sheet 58)

0 ½ Mile Scale 1:15840 0 3000 Feet

(52)

N

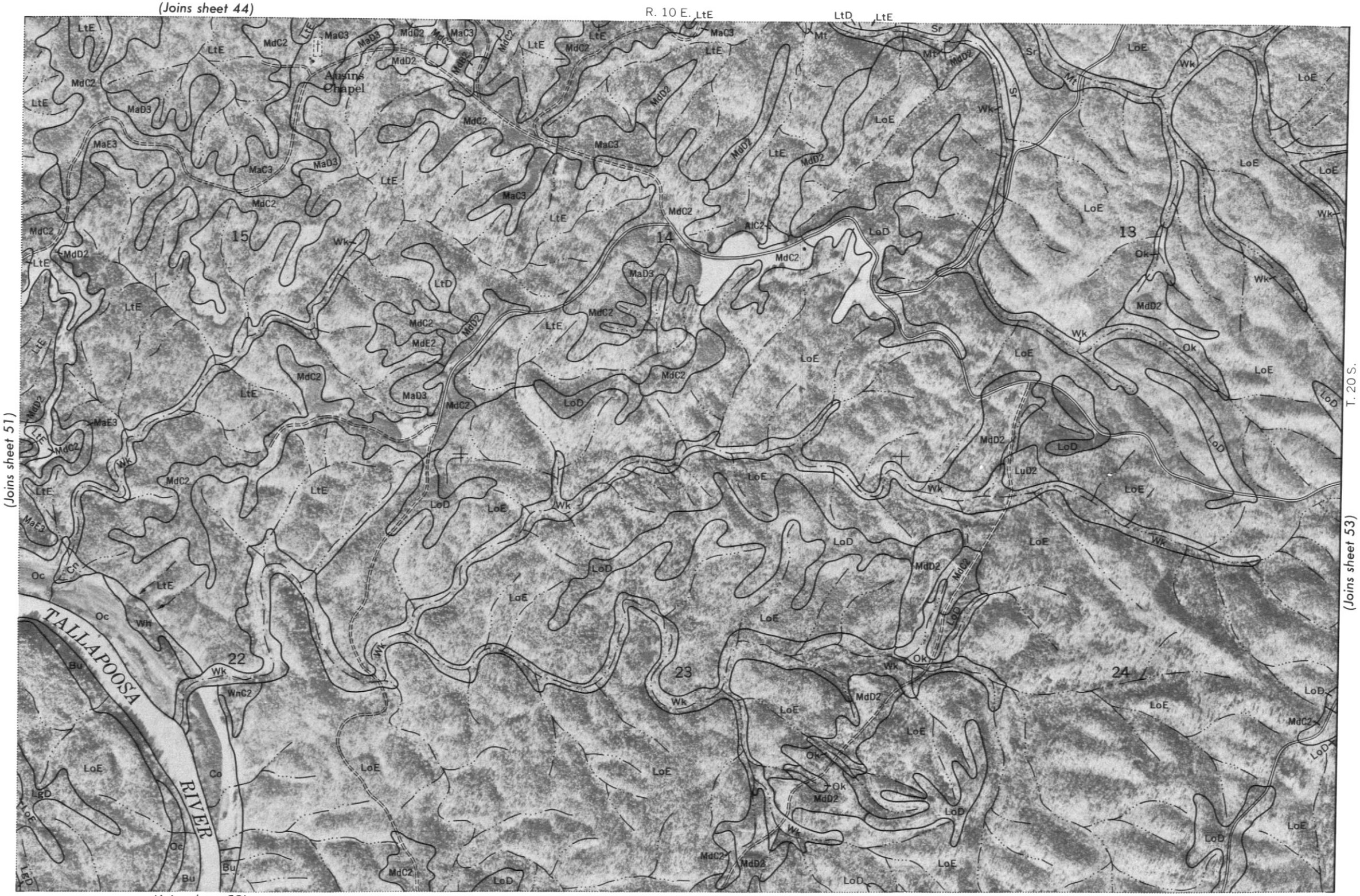
(Joins sheet 44)

R. 10 E.

(Joins sheet 51)

T. 20 S.

(Joins sheet 53)



(Joins sheet 59)

0 ½ Mile Scale 1:15840 0 3000 Feet


R. 11 E.
(Joins sheet 45)
N
T. 20 S.
(Joins sheet 52)
(Joins sheet 54)
(Joins sheet 60)
18
17
16
19
20
21
LoE
LoD
Wk
MdD2
MdC2
MaC3
MaD3
Ok
MdE2
LgE
LgD
LtE
MdB2
AuB
Wh
MaE3
HuB2
HuC2
MdC2
AlC2
LsC2
LsD2
LsE2
LtD
Mt
WgD2
WnD2
WnC2
WmB2
AuA
AaA
Ra
AlB2
Te
LgC
Wildcat Creek
0
½ Mile
Scale 1:15840
0
3000 Feet

N

(Joins sheet 46)

R. 11 E.

T. 20 S.

(Joins sheet 53)

(Joins sheet 55)

(Joins sheet 61)

Wetbowed Lake

Wildcat Creek

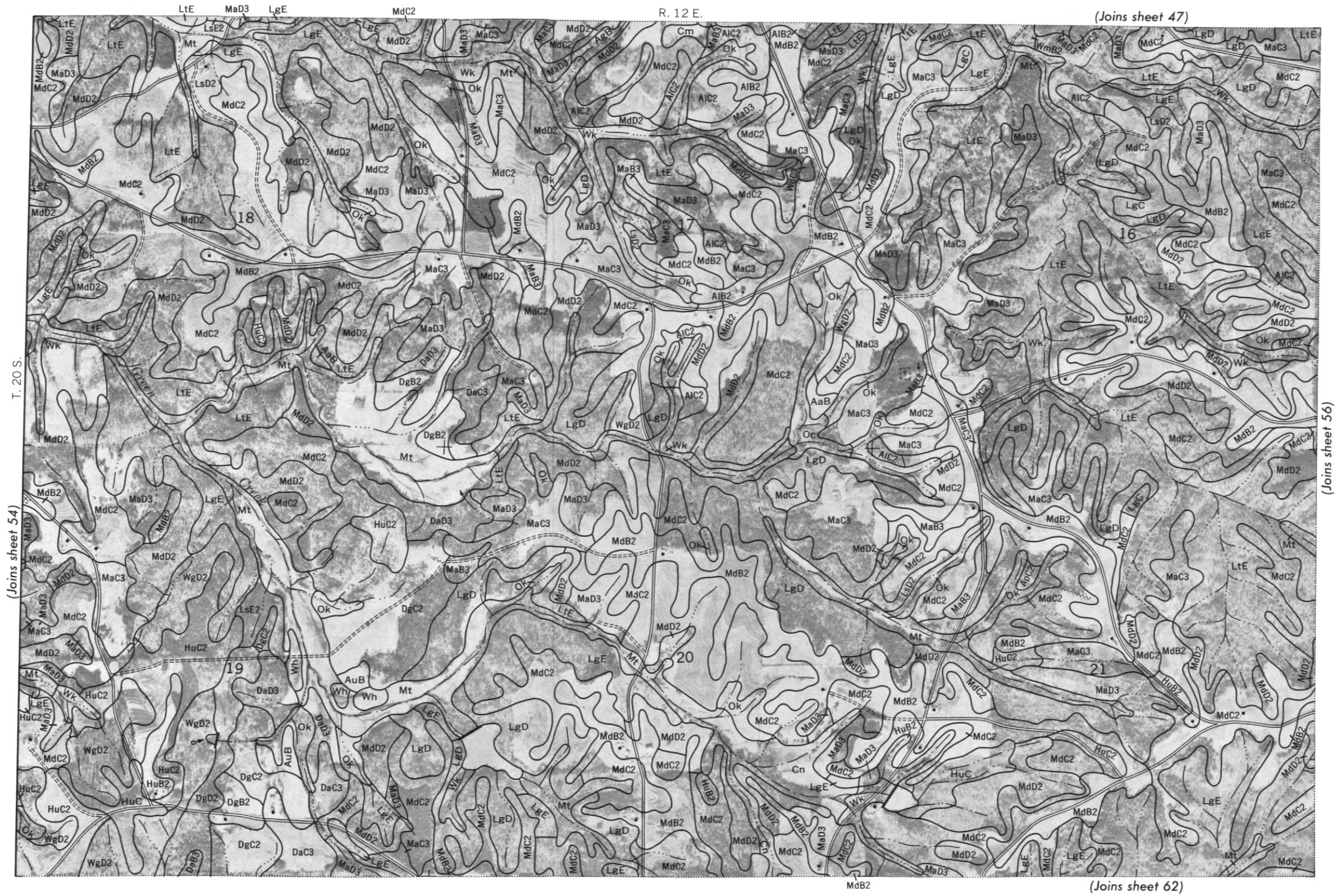
Midway Church

Tenant Calvary Church

0 ½ Mile

Scale 1:15840

0 3000 Feet


N
R. 12 E.
T. 20 S.
(Joins sheet 47)
(Joins sheet 54)
(Joins sheet 56)
(Joins sheet 62)
18
17
16
19
20
21
Creek
Green
Cn
Cm
Mt
Wk
Ok
Wh
Oc
0
½ Mile
Scale 1:15840
0
3000 Feet

N

(Joins sheet 48)

R. 12 E.

(Joins sheet 55)

(Joins sheet 57)

T. 20 S.

(Joins sheet 63)

Highway Church

Potash

0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 13 E.

T. 20 S.

(Joins sheet 49)

(Joins sheet 56)

(Joins sheet 65)

(Joins sheet 64)

Big Springs School

18 17 16 19 20 21

0 ½ Mile

Scale 1:15840

0 3000 Feet

58

N

(Joins sheet 51)

R. 10 E.

T. 20 S.

CLAY COUNTY

TALLAPOOSA RIVER

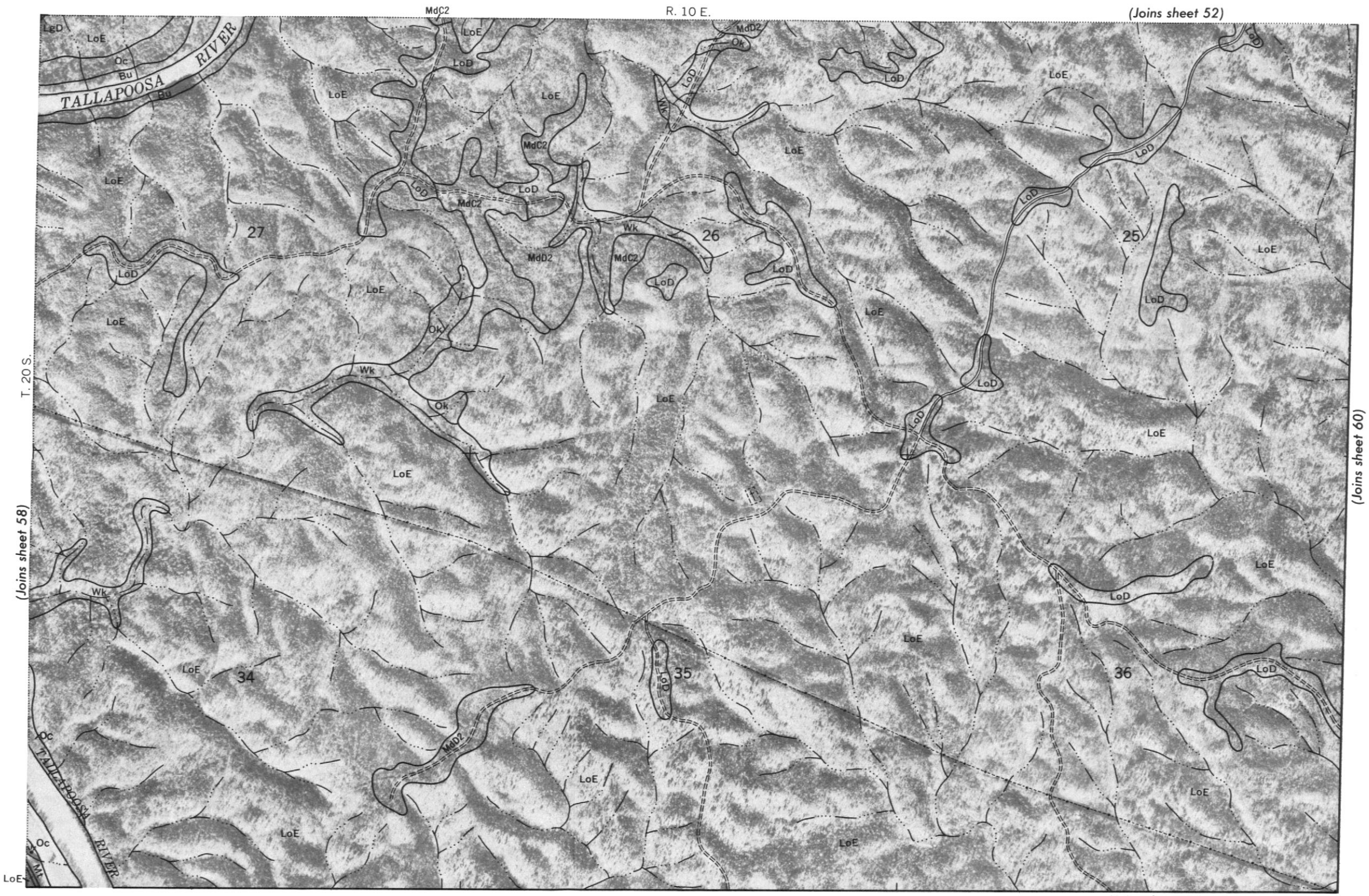
ATLANTIC COAST LINE

CROOKED CREEK

(Joins sheet 59)

(Joins sheet 66)

0 ½ Mile Scale 1:15840 0 3000 Feet


N
R. 10 E.
T. 20 S.
(Joins sheet 52)
(Joins sheet 58)
(Joins sheet 60)
(Joins sheet 67)
TALLAPOOSA RIVER
LgD
LoE
Oc
Bu
MdC2
MdD2
Ok
Wk
LoD
27
26
25
34
35
36
0
½ Mile
Scale 1:15840
0
3000 Feet

(60)

N

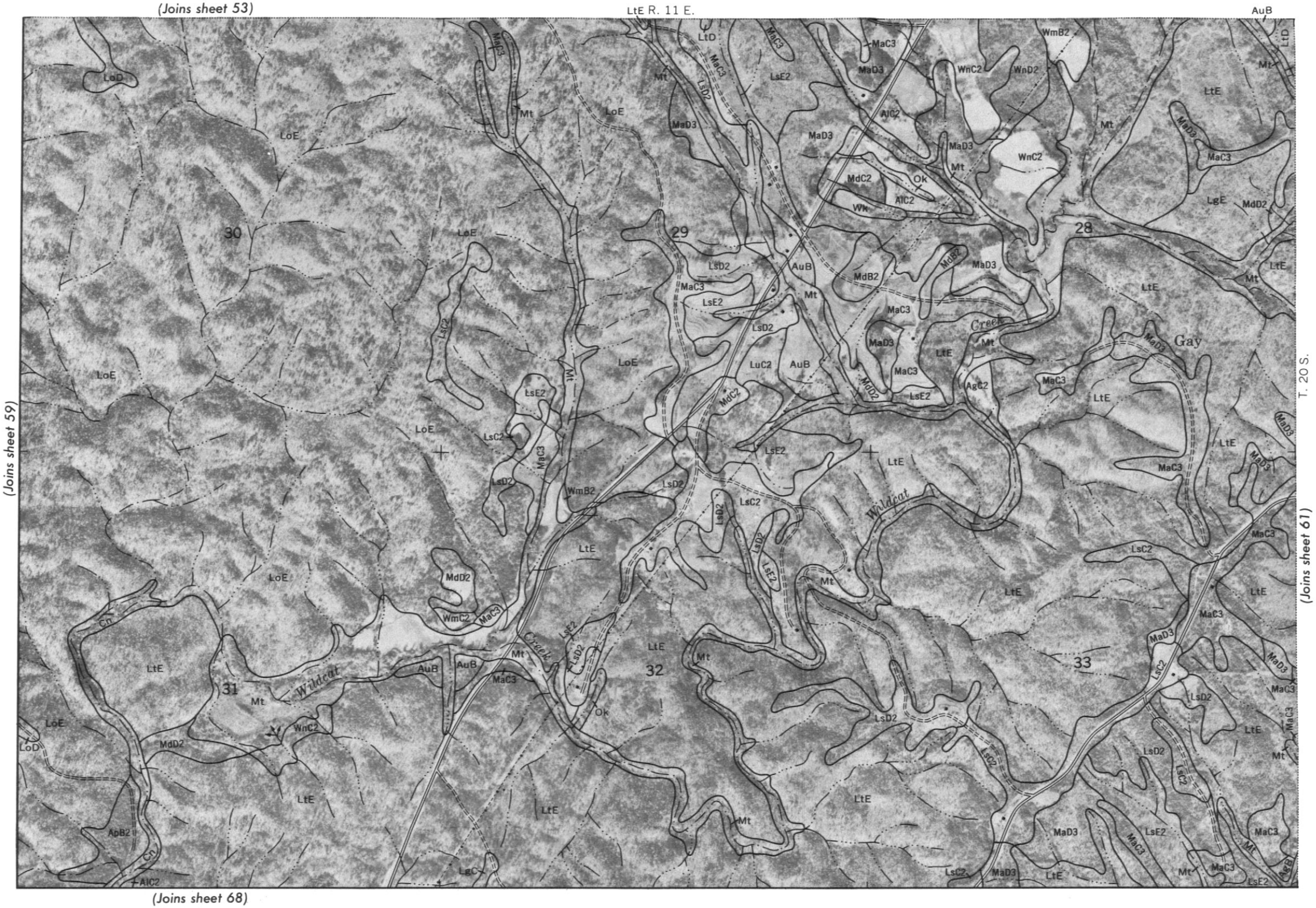
(Joins sheet 53)

LtE R. 11 E.

(Joins sheet 59)

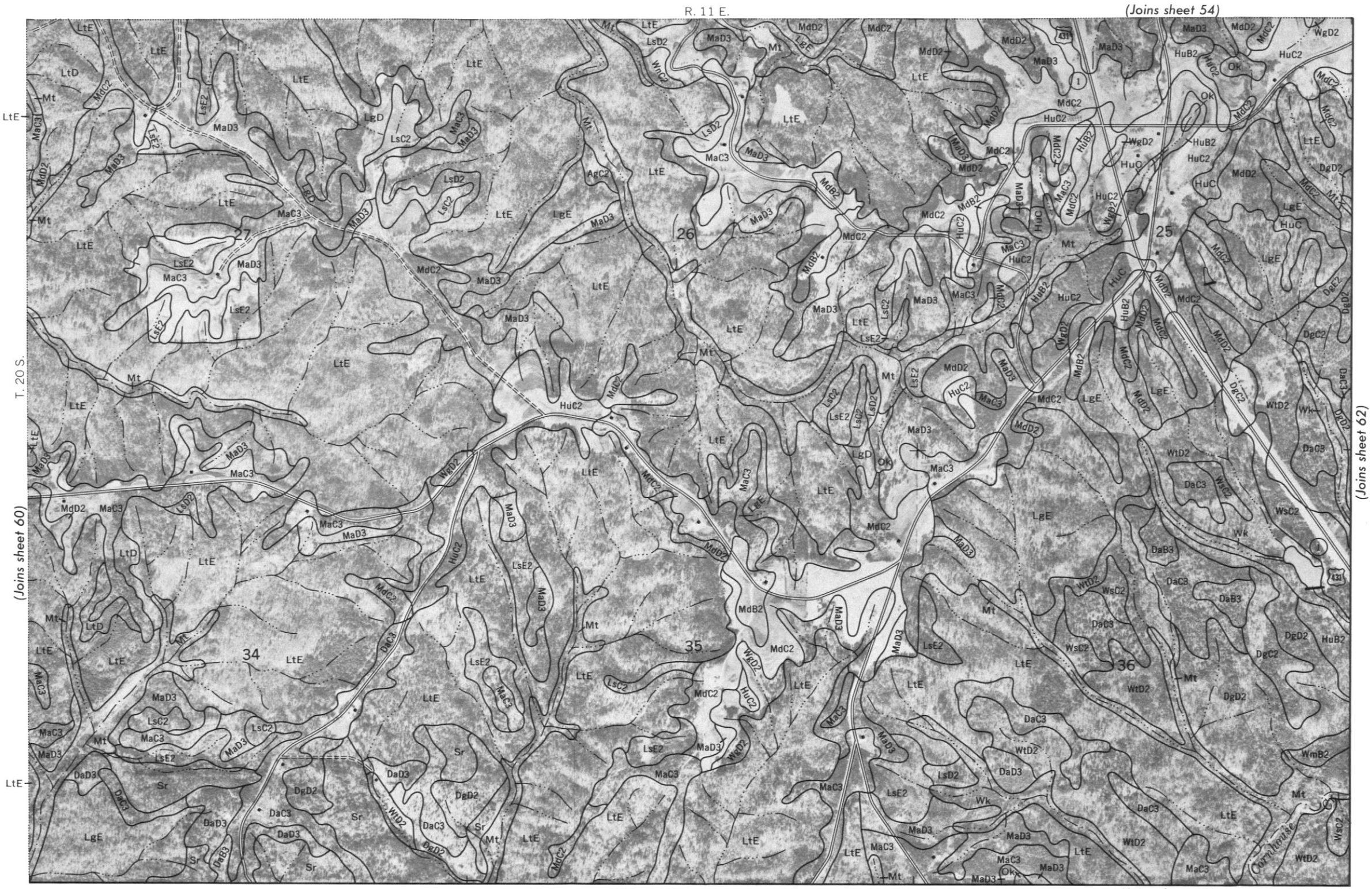
(Joins sheet 61)

T. 20 S.



(Joins sheet 68)

0 ½ Mile Scale 1:15840 0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

62

N

(Joins sheet 55)

R. 12 E.

T. 20 S.

(Joins sheet 61)

(Joins sheet 63)

(Joins sheet 70)

Friendship Church

West

Cornhouse Creek

29

30

31

32

33

28

0 ½ Mile

Scale 1:15840

0 3000 Feet

RANDOLPH COUNTY, ALABAMA — SHEET NUMBER 63

63

N

R. 12 E.

(Joins sheet 56)

T. 20 S.

(Joins sheet 62)

(Joins sheet 64)

(Joins sheet 71)

High Shoals

Mt Wehadkee Creek

Pine Creek

0 ½ Mile

Scale 1:15840

0 3000 Feet

64

N

(Joins sheet 57)

R. 13 E.

(Joins sheet 63)

(Joins sheet 65)

T. 20 S.

(Joins sheet 72)

Wehadkee Creek

Wehadkee

30 29 28 31 32 33

MdD2 MdD2 Mt Wk LtE MdC2 MaD3 MdB2 LgD MaC3 LgE LtD LgC WmB2 WmC2 Oc Te MdE2 WnC2 WnD2 HuB2 LsE2

0 ½ Mile Scale 1:15840 0 3000 Feet

N

(Joins lower right)

R. 13 E.

T. 20 S.

HEARD COUNTY

GEORGIA

(Joins sheet 64)

(Joins sheet 73)

(Joins sheet 50)

(Joins sheet 57)

(Joins upper left)

Beulah Church

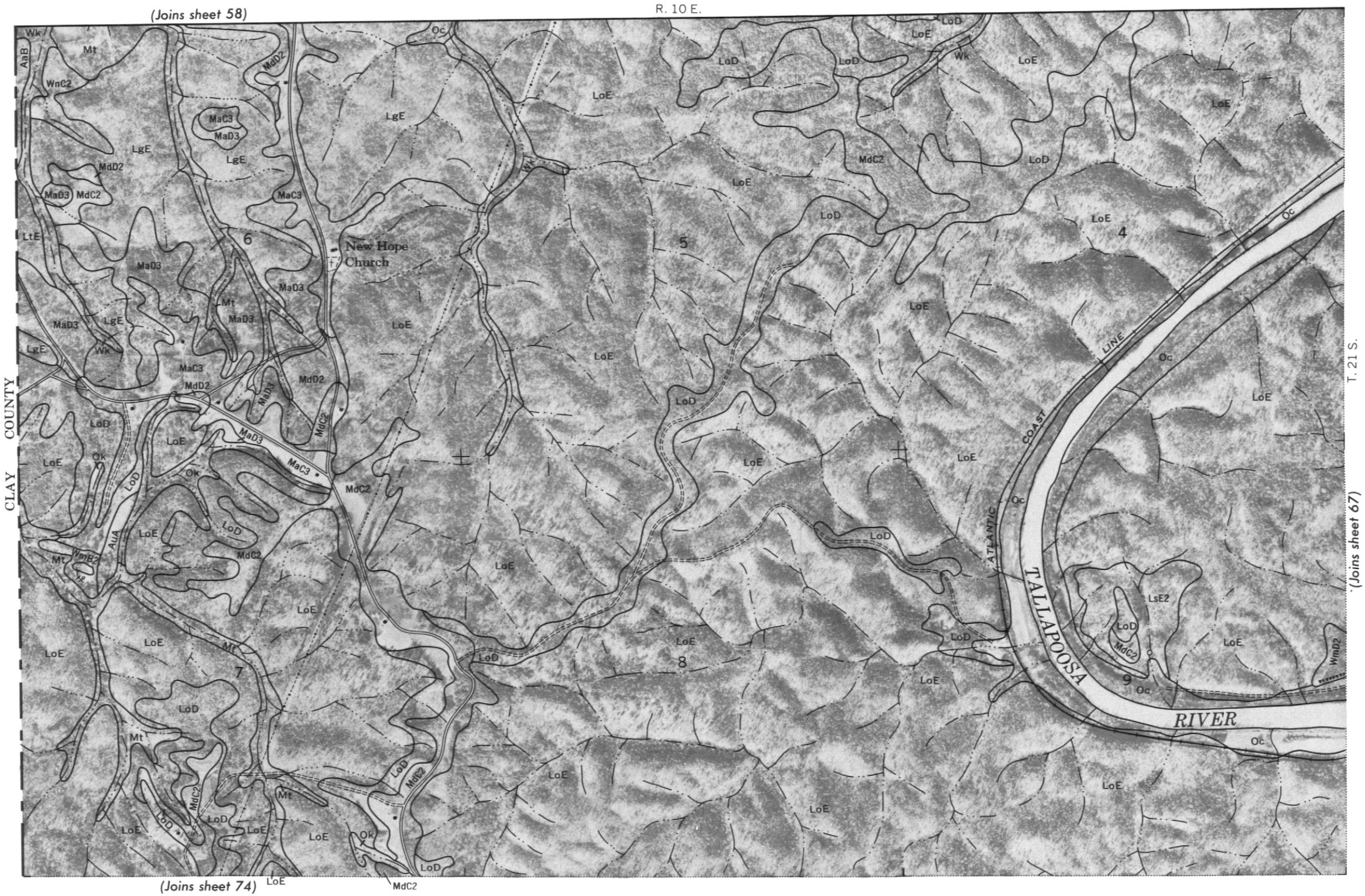
0 ½ Mile

Scale 1:15840

0 3000 Feet

66

N



0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 10 E.

(Joins sheet 59)

T. 21 S.

(Joins sheet 66)

(Joins sheet 68)

TALLAPOOSA RIVER

ATLANTIC COAST LINE

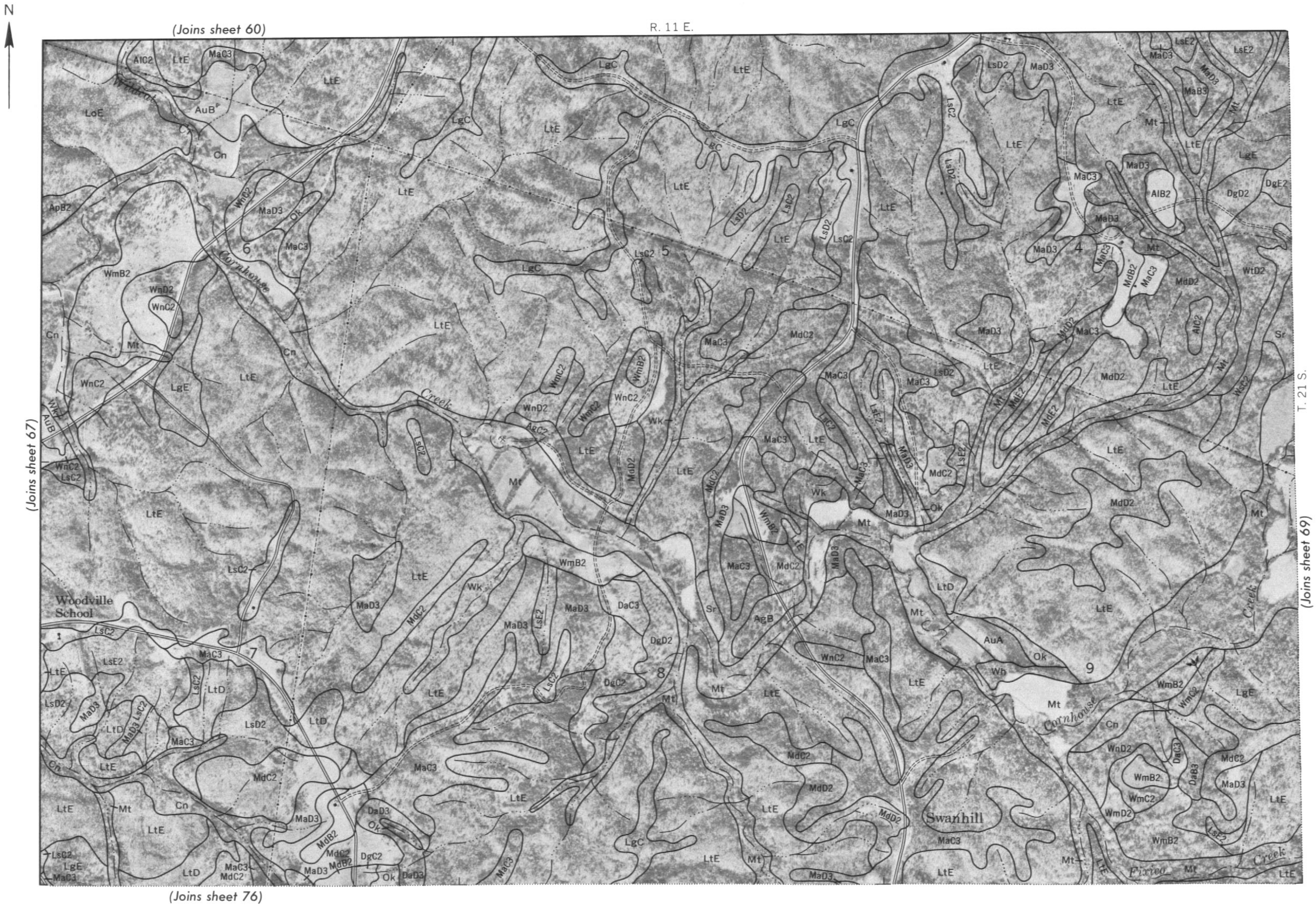
Courthouse Creek

(Joins sheet 75)

0 ½ Mile

Scale 1:15840

0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 11 E.

(Joins sheet 61)

T. 21 S.

(Joins sheet 68)

(Joins sheet 70)

(Joins sheet 77)

Cornhouse Rock Springs Church

Creek

Gaston Branch

0 ½ Mile

Scale 1:15840

0 3000 Feet

RANDOLPH COUNTY, ALABAMA — SHEET NUMBER 70

70

N

(Joins sheet 62)

R. 12 E.

T. 21 S.

(Joins sheet 69)

(Joins sheet 71)

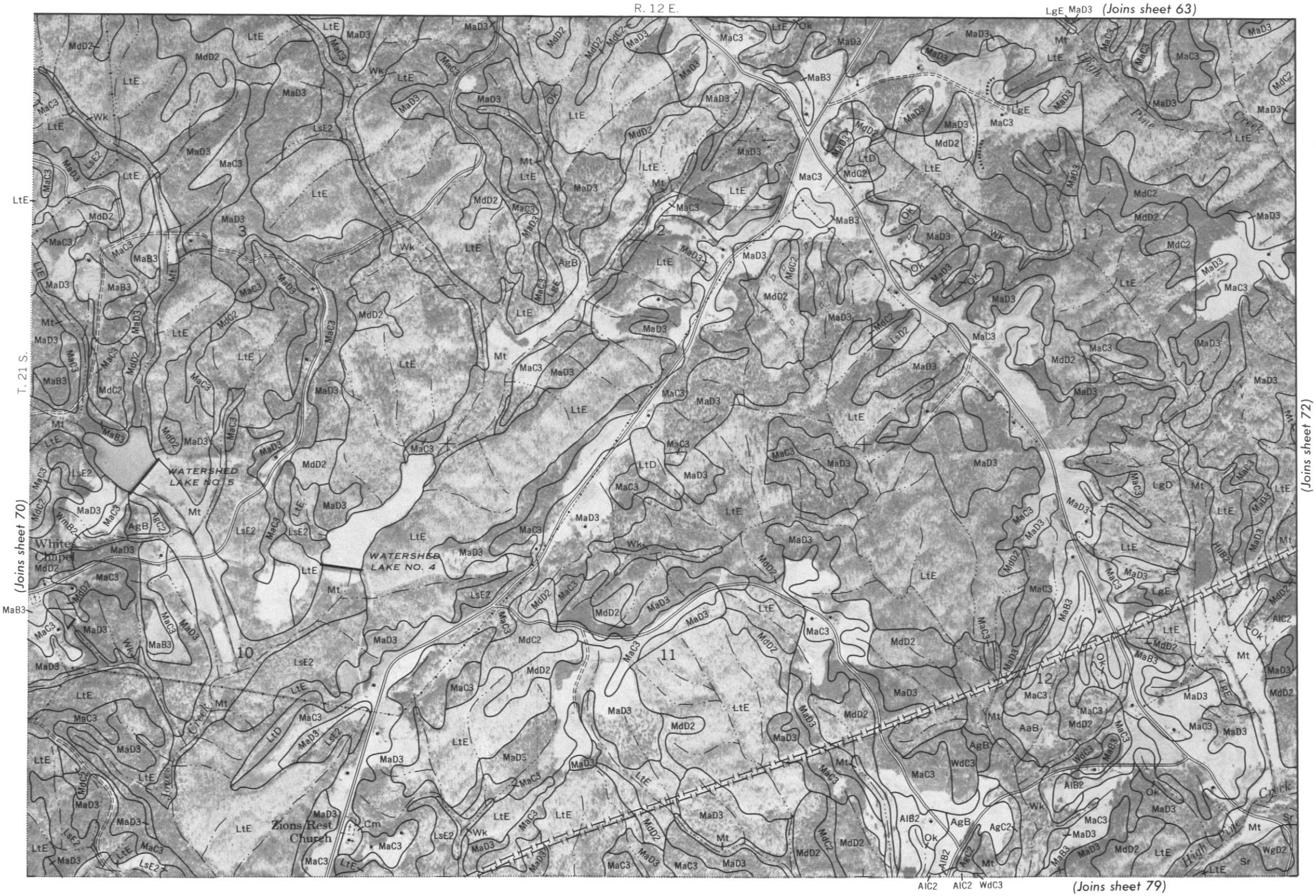
(Joins sheet 78)

Rock Stand School

0 ½ Mile

Scale 1:15840

0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

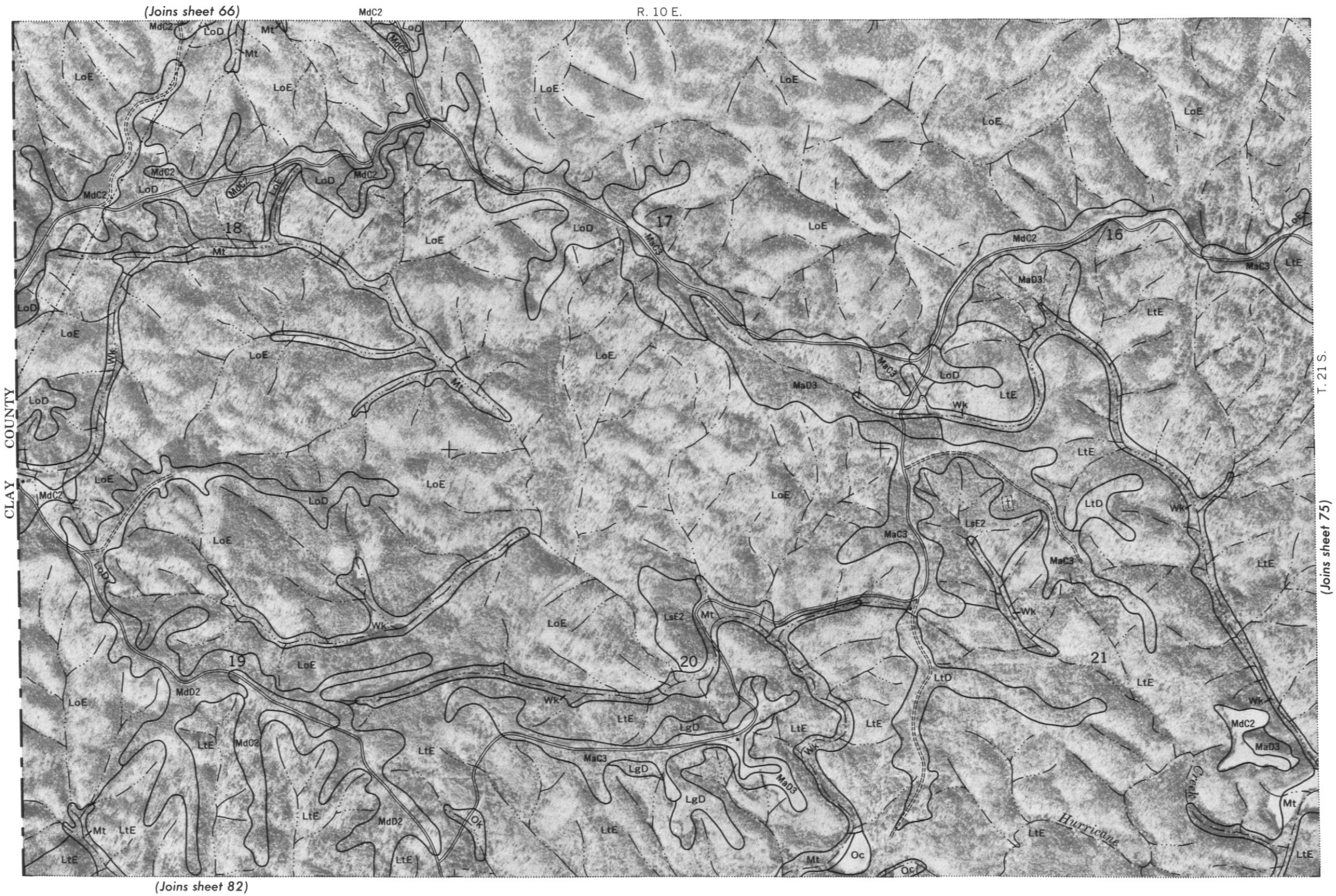
0 ½ Mile Scale 1:15840 0 3000 Feet

N

0 ½ Mile Scale 1:15840 0 3000 Feet

74

N



0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 10 E.

(Joins sheet 67)

T. 21 S.

(Joins sheet 74)

(Joins sheet 76)

(Joins sheet 83)

Malone

RIVER

TALLAPOOSA

ATLANTIC COAST LINE

15 14 13 22 23 24

0 ½ Mile

Scale 1:15840

0 3000 Feet

N

(Joins sheet 68)

R. 11 E.

T. 21 S.

(Joins sheet 75)

(Joins sheet 77)

(Joins sheet 84)

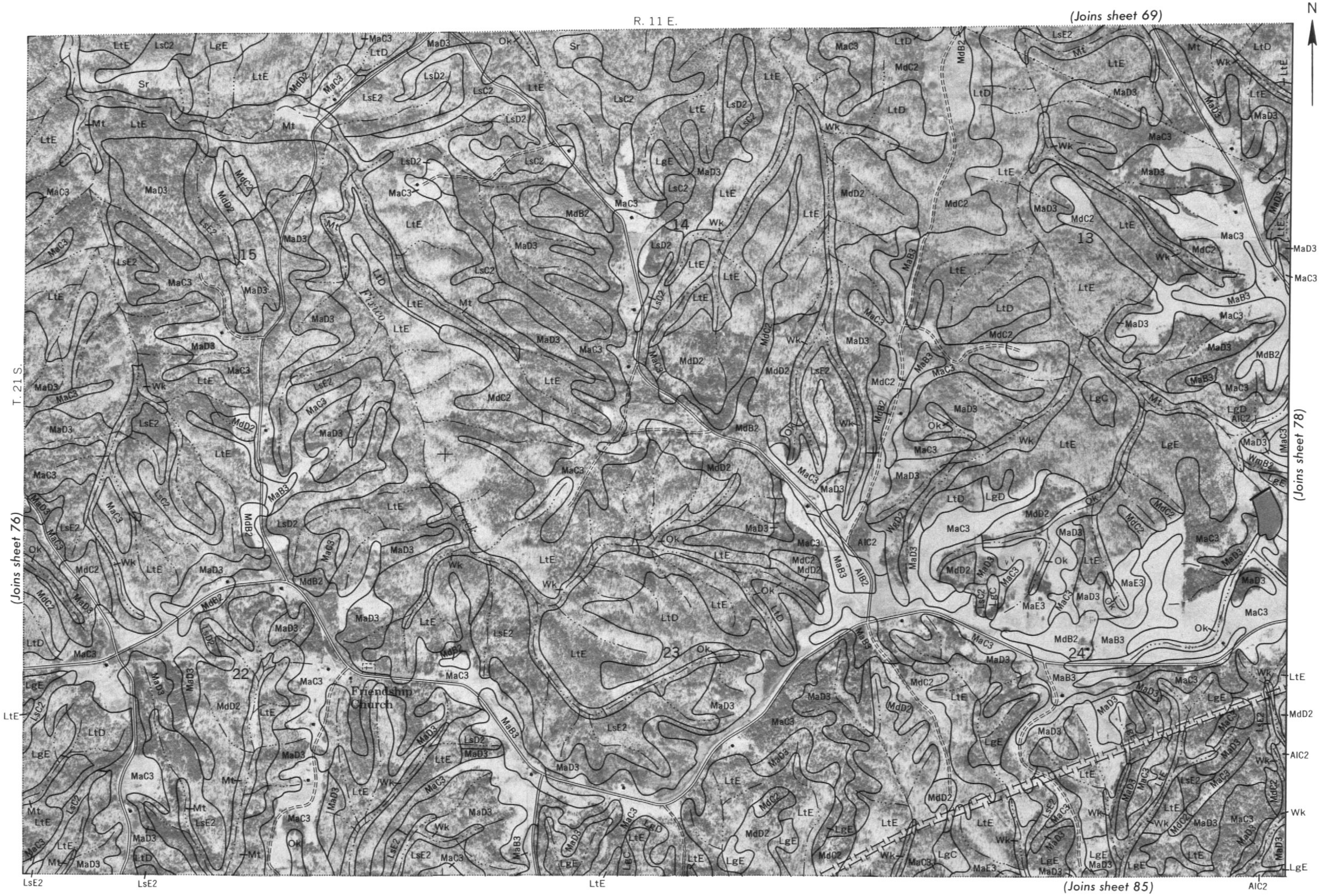
Macedonia Church

Level Road

0 ½ Mile

Scale 1:15840

0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

78

N

(Joins sheet 70)

R. 12 E.

T. 21 S.

(Joins sheet 77)

(Joins sheet 79)

(Joins sheet 86)

WATERSHED LAKE NO. 6

Union Hill Church

Ocre

Jones Creek

18 17 16 19 20 21

0 ½ Mile Scale 1:15840 0 3000 Feet

RANDOLPH COUNTY, ALABAMA — SHEET NUMBER 79

N

R. 12 E.

(Joins sheet 71)

T. 21 S.

(Joins sheet 78)

(Joins sheet 80)

(Joins sheet 87)

Welcome Home Church

Lebanon Church

Macedonia Church

WATERSHED LAKE NO. 2

Jones Creek

Pine High

JONES CREEK

0 ½ Mile

Scale 1:15840

0 3000 Feet

N

(Joins sheet 72)

R. 13 E.

(Joins sheet 79)

(Joins sheet 81)

T. 21 S.

(Joins sheet 88)

Center Chapel Church

Scale 1:15840

0 ½ Mile

0 3000 Feet

N

(Joins sheet 73)

R. 13 E.

T. 21 S.

(Joins sheet 80)

(Joins sheet 89)

0 ½ Mile Scale 1:15840 0 3000 Feet

(82)

N

(Joins sheet 74)

R. 10 E.

T. 21 S.

CLAY COUNTY

(Joins sheet 83)

(Joins sheet 90)

Almond

0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 10 E.

T. 21 S.

(Joins sheet 75)

(Joins sheet 82)

(Joins sheet 84)

(Joins sheet 91)

Corinth Church

TALLAPOOSA RIVER

ATLANTIC COAST LINE

Cedar Creek

Tyus Creek

Scale 1:15840

0 ½ Mile

0 3000 Feet

(84)

N

(Joins sheet 76)

R. 11 E.

T. 21 S.

(Joins sheet 83)

(Joins sheet 85)

(Joins sheet 92)

Hope Memorial Church

Forester Chapel

PUMPING STATION

Beaverdam Creek

30 29 28 31 32 33

0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

0 ½ Mile Scale 1:15840 0 3000 Feet

N

R. 12 E.

(Joins sheet 79)

T. 21 S.

(Joins sheet 86)

(Joins sheet 88)

ROANOKE

(Joins sheet 95)

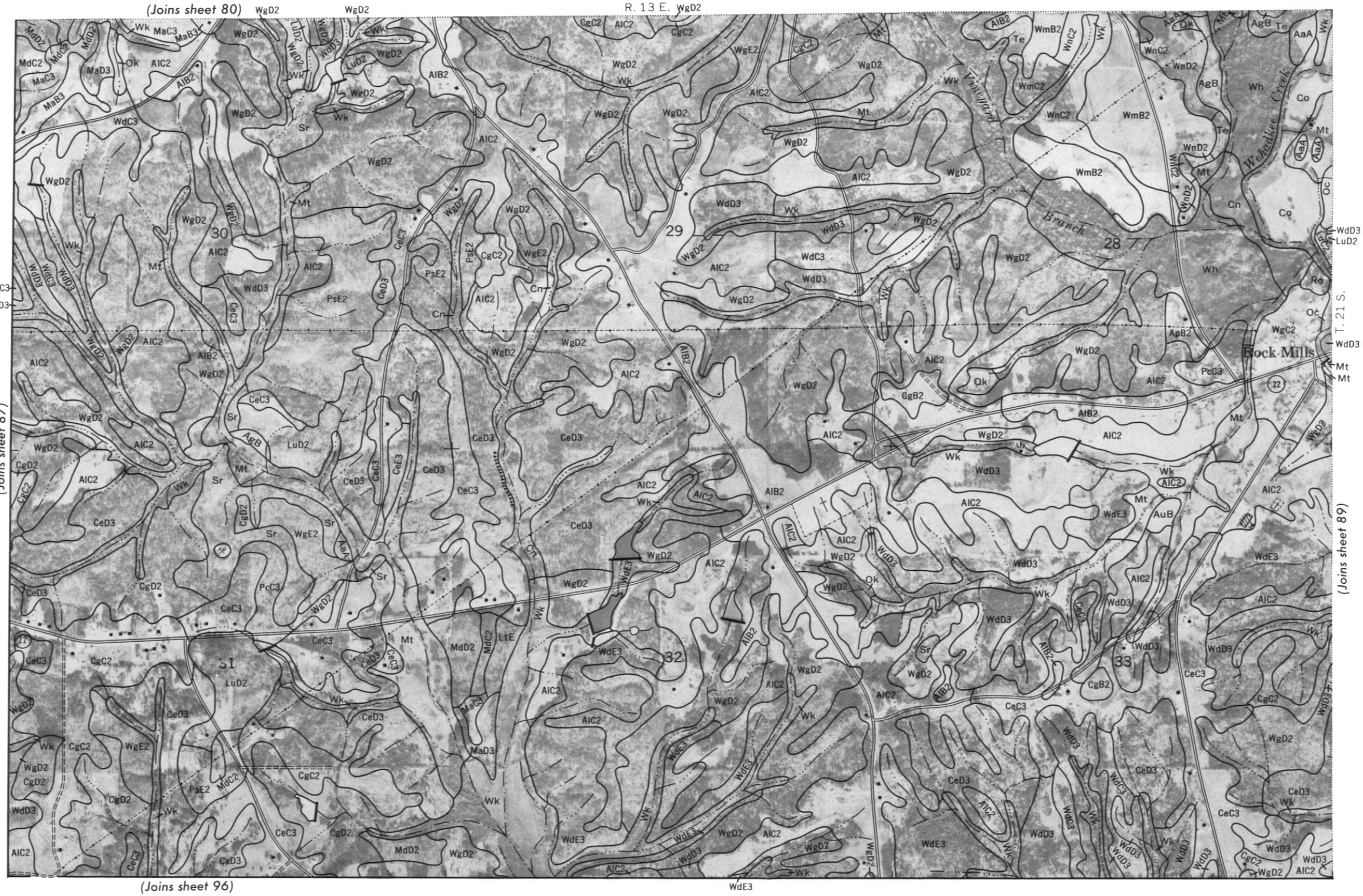
0 ½ Mile

Scale 1:15840

0 3000 Feet

88

N



0 ½ Mile Scale 1:15840 0 3000 Feet

(Joins sheet 81)

R. 13 E.

T. 21 S.

(Joins sheet 88)

(Joins sheet 97)

N

Lime

HEARD COUNTY

GEORGIA

TROUP CO. GA.

Weogufka Creek

0 ½ Mile

Scale 1:15840

0 3000 Feet

N

(Joins sheet 82)

R. 10 E.

T. 22 S.

COUNTY

CLAY

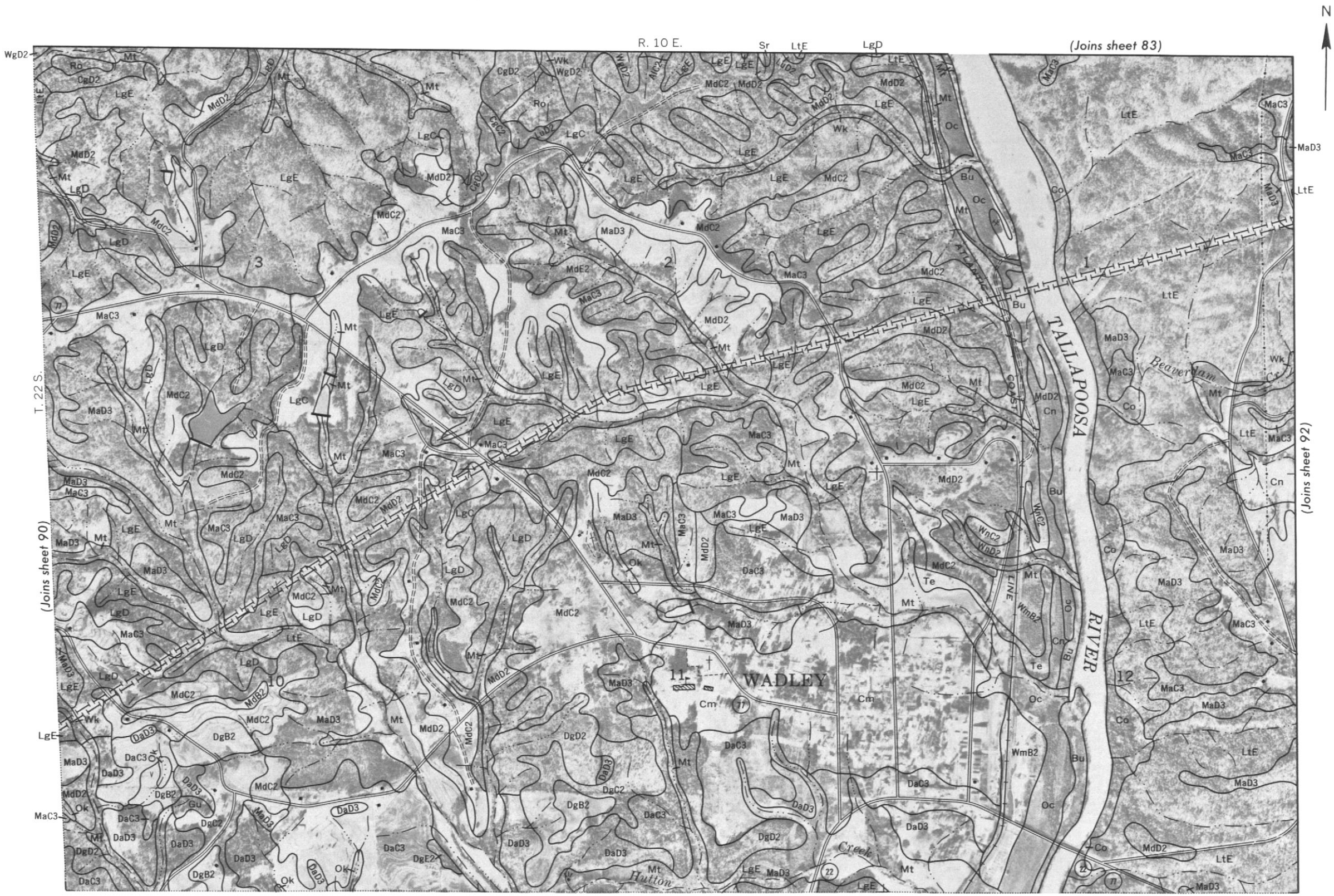
Cedar Creek

Pleasant Hill Church

(Joins sheet 91)

(Joins sheet 98)

0 ½ Mile Scale 1:15840 0 3000 Feet


N
R. 10 E.
T. 22 S.
(Joins sheet 83)
(Joins sheet 90)
(Joins sheet 92)
(Joins sheet 98)
WADLEY
TALLAPOOSA RIVER
ATLANTIC COAST LINE
Beaverdam Creek
Hutton Creek
0 ½ Mile
Scale 1:15840
0 3000 Feet

92

N

R. 11 E.

T. 22 S.

(Joins sheet 84)

(Joins sheet 91)

(Joins sheet 93)

(Joins sheet 99) 77

Galilee Church

Concord Church

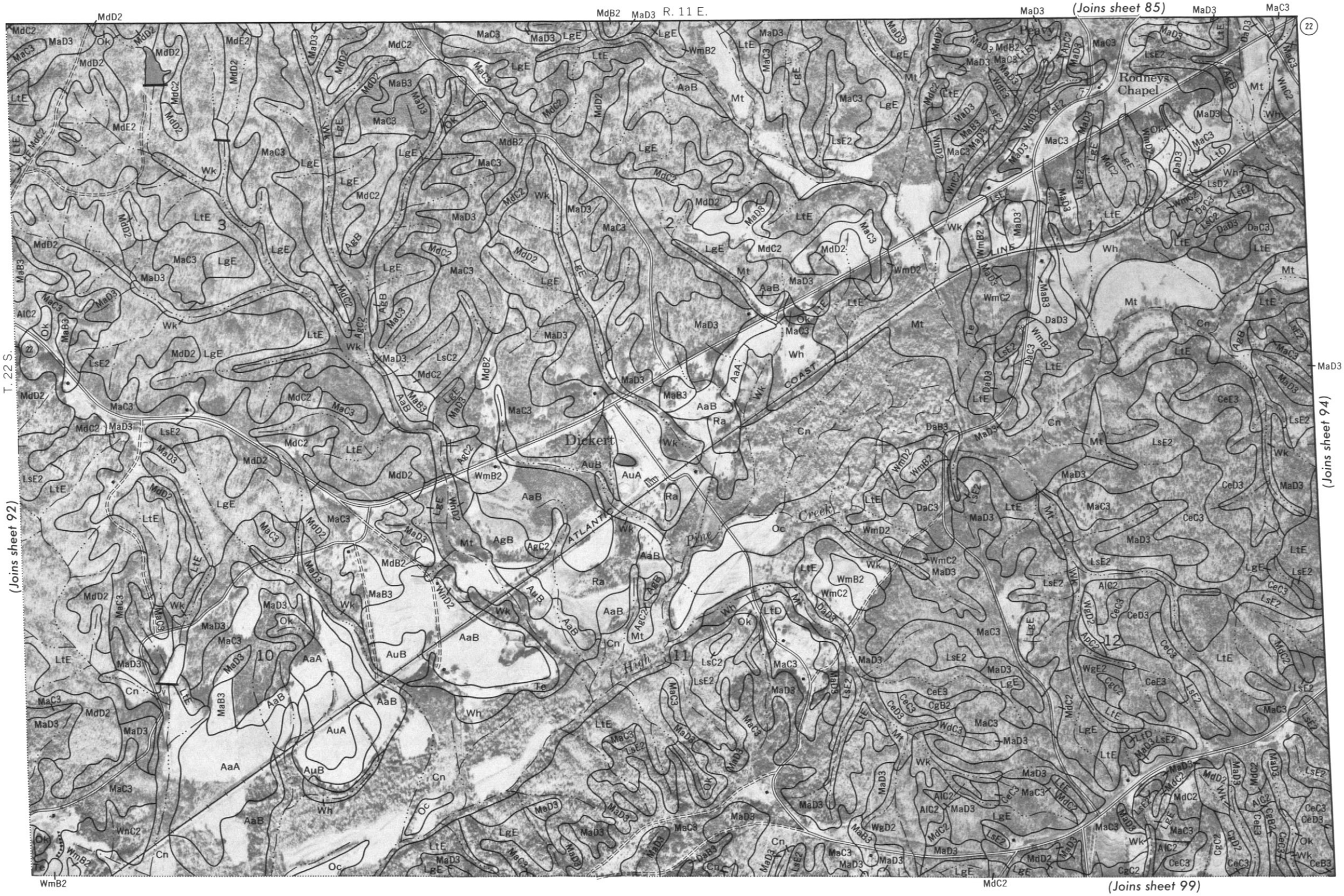
Louina

Beaverdam Creek

0 ½ Mile

Scale 1:15840

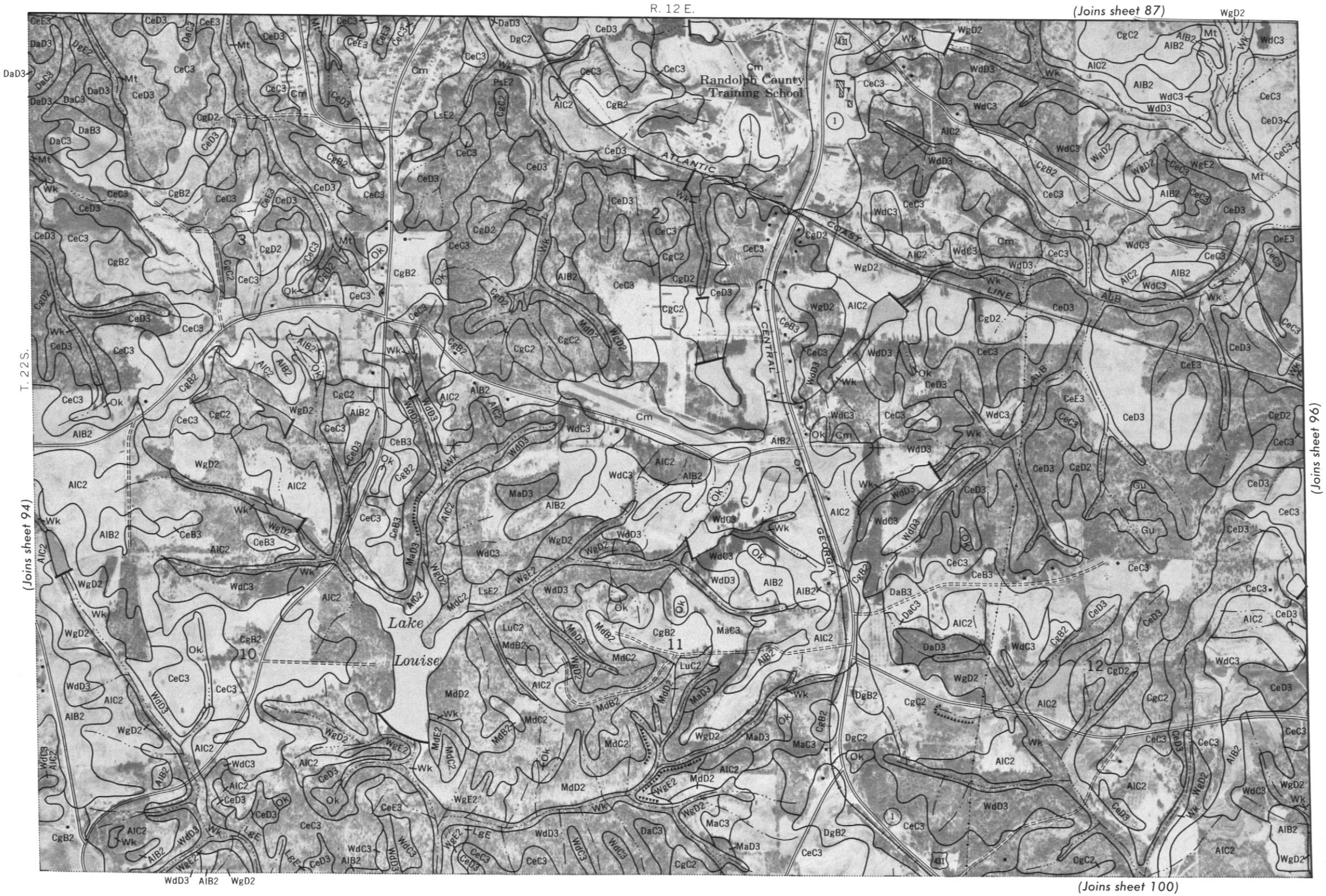
0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

94

0 ½ Mile Scale 1:15840 0 3000 Feet



0 ½ Mile Scale 1:15840 0 3000 Feet

(96)

N

R. 13 E.

T. 22 S.

(Joins sheet 88)

(Joins sheet 95)

(Joins sheet 97)

(Joins inset sheet101)

ATLANTIC COAST LINE

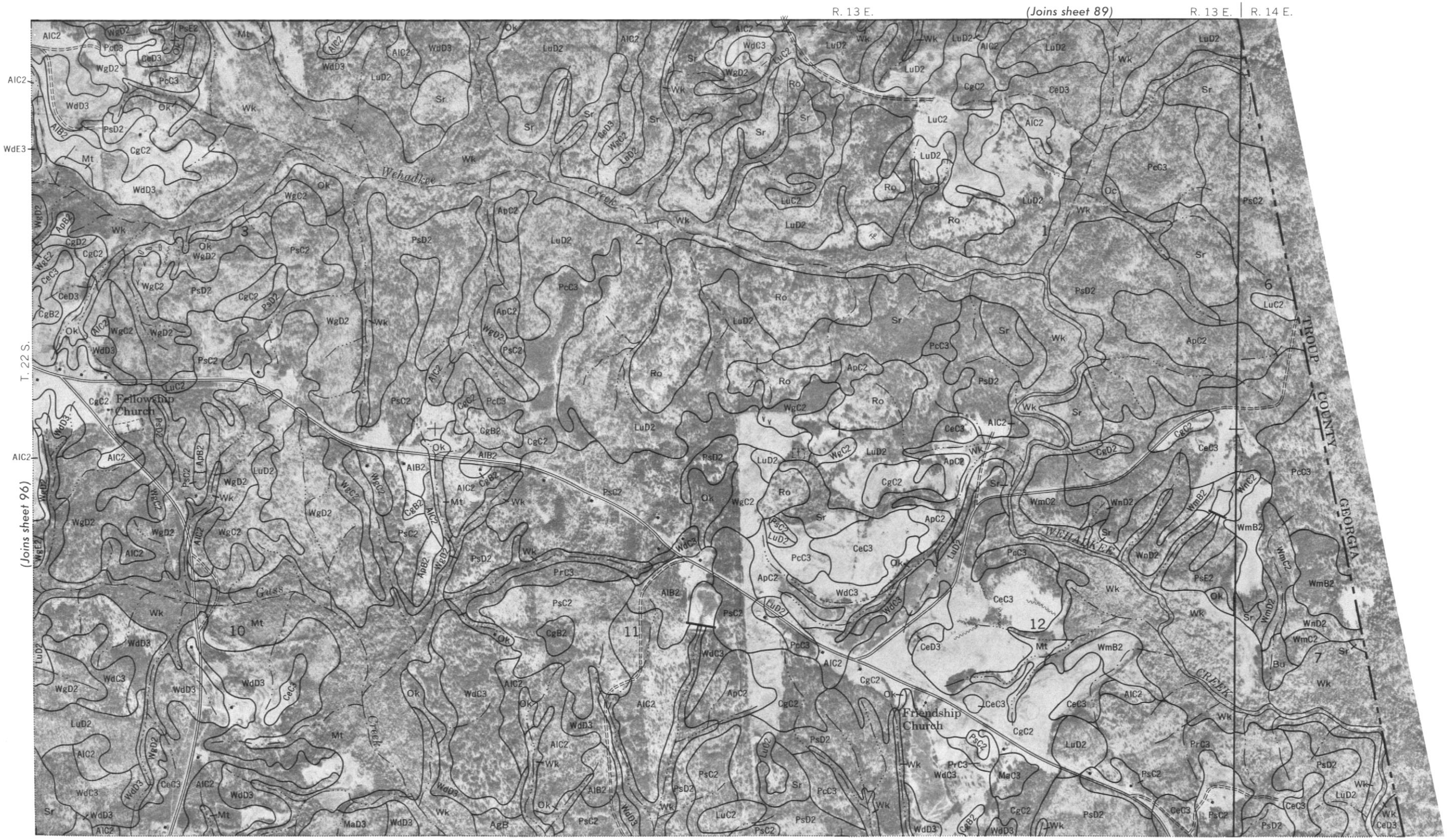
Creek

Meacham Cr

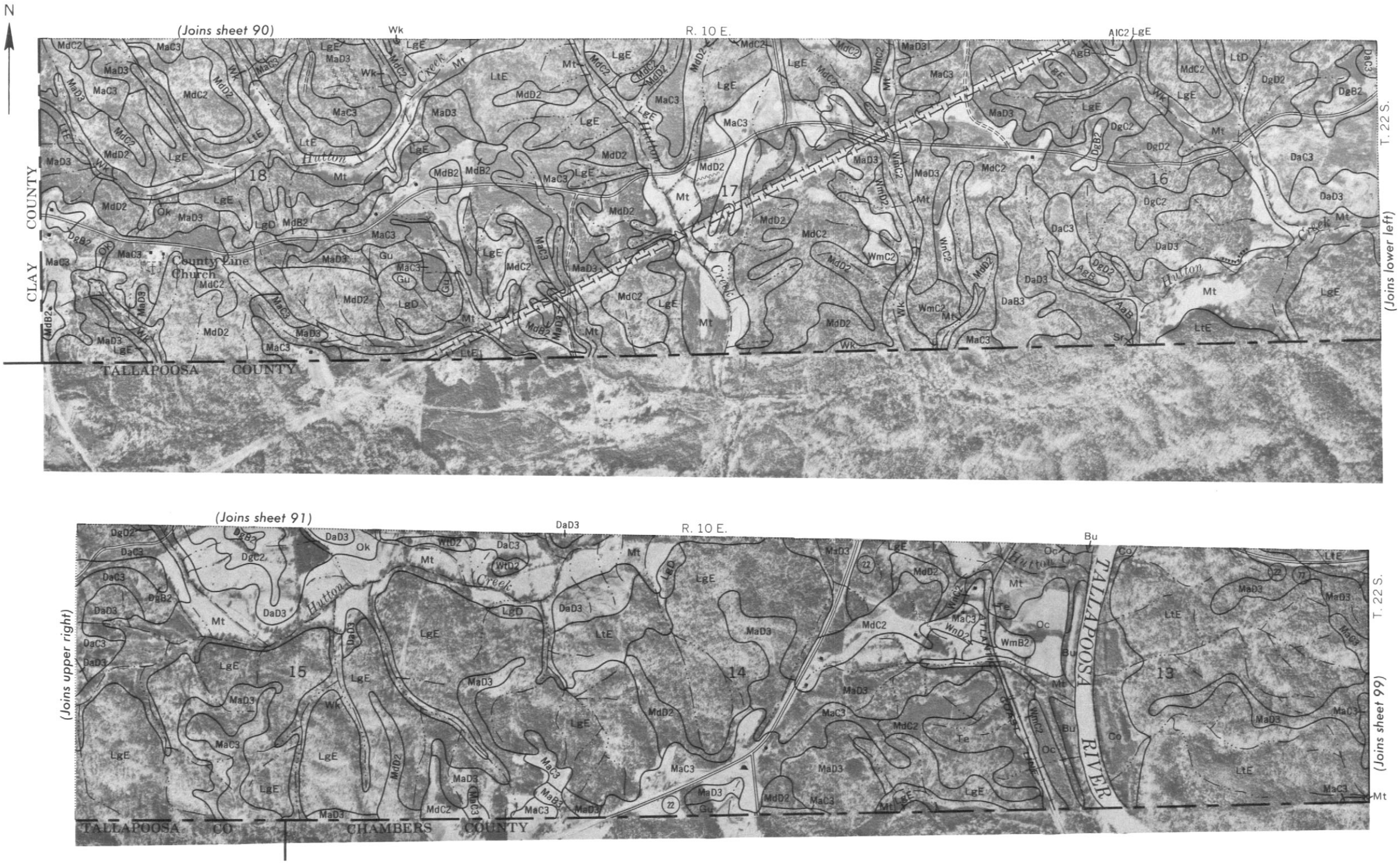
0 ½ Mile

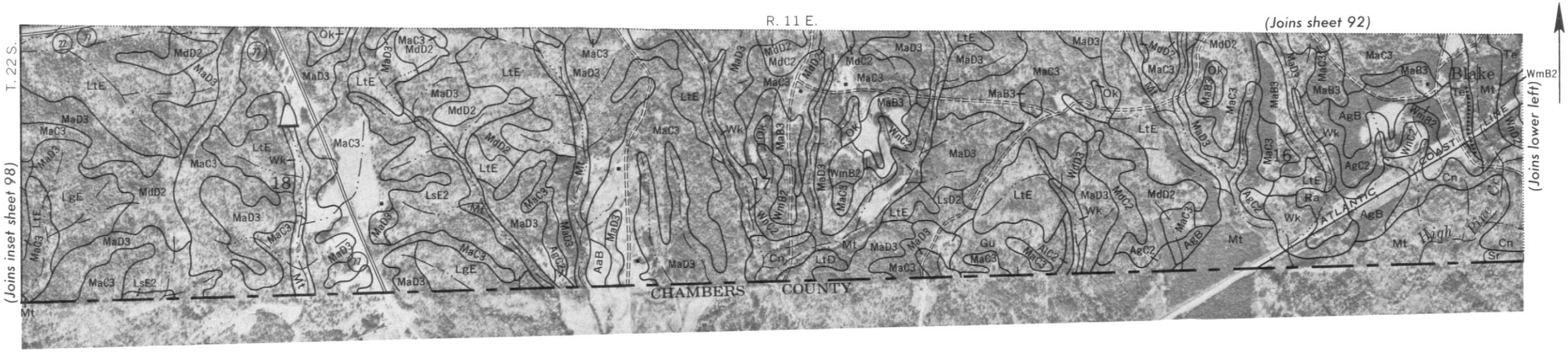
Scale 1:15840

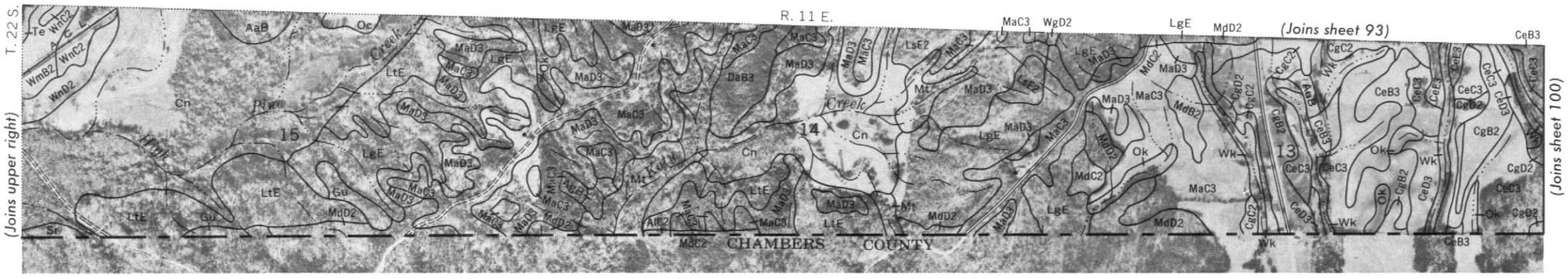
0 3000 Feet


R. 13 E.
(Joins sheet 89)
R. 13 E.
R. 14 E.
N
T. 22 S.
(Joins sheet 96)
(Joins sheet 101)
Wehadkee Creek
Gaus Creek
WEHADKEE CREEK
TROUP COUNTY
GEORGIA
Fellowship Church
Friendship Church
0
½ Mile
Scale 1:15840
0
3000 Feet

98


N
(Joins sheet 90)
R. 10 E.
T. 22 S.
(Joins lower left)
CLAY COUNTY
TALLAPOOSA COUNTY
County Line Church
Hutton Creek
18
17
16
(Joins upper right)
(Joins sheet 91)
R. 10 E.
T. 22 S.
(Joins sheet 99)
15
14
13
TALLAPOOSA RIVER
TALLAPOOSA CO
CHAMBERS COUNTY
0
½ Mile
Scale 1:15840
0
3000 Feet





0 ½ Mile Scale 1:15840 0 3000 Feet